

Emigre no. 39

Graphic Design and the Next Big Thing

Price: Seven.ninetyfive



Emigre no.39

Summer 1996

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This issue of Emigre
was typeset in Base-9.

Postmaster:

Emigre (ISSN 1045-3717)
is published quarterly for \$28
per year by Emigre, Inc.,
4475 D Street, Sacramento,
CA 95819. U.S.A.

Second class postage paid
at Sacramento, CA.

Postmaster please send
address changes to: Emigre,
4475 D Street, Sacramento,
CA 95819, U.S.A.

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Preface

I've always wanted to publish an issue like this one. No pictures, just text. As its title *Graphic design and the Next Big Thing* came into focus, so did my decision to forego using images. Not as some kind of spiteful gesture – as I'm aware of my audience's dislike of reading matter, or perhaps more precisely, their bias towards visual matter – but rather because we simply do not know what the Next Big Thing will look like.

What I do know is that in the near future, linear reading and traditional publishing will experience serious competition from electronic media, which is what this issue is all about. It seemed fitting, then, that this issue would function also as a tribute of sorts to a form of reading that is in serious jeopardy.

RYDL

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Graphic design and the Next Big Thing

By Rudy VanderLans

A few months back Louise Sandhaus contacted me to see if I was interested in creating an issue of *Emigre* that would document *101: The Future of Design Education in the Context of Computer-Based Media*, a symposium she had organized at the Jan van Eyck Academy in Holland. The symposium explored questions about what future graphic designers are being educated for and what the role of the designer will be. To encourage me to publish this information, Louise assured me that people were probably chomping at the bit for *Emigre* to introduce this material in some intelligent and interesting way.*

While ambivalent about the value of such crystal ball events, what intrigued me about this request was how *Emigre* continues to be regarded as the place where the *Next Big Thing*, for lack of a better term, is not only regularly covered but also expected to be covered. The many disgruntled letters about our recent shift in editorial policy away from such popular phenomena underline this fact.

This *feeding the trout* as one letter writer put it, the act of somehow keeping our readers abreast of trends, is an impossible task. Having been privy to the making of one trend in no way prepares one to recognize the harbingers of the next. I'm unsure whether this is because the *Next Big Thing* is simply a product of hindsight, or because it is human nature to regard ground-breaking work as the final solution, nullifying the possibility of the next *Next Big Thing*. The latter is particularly tempting to believe when you've had your moment in the sun while riding the *Next Big Thing* wave, but piques the younger generations who are eager to have their own experiences of experimentation and discovery.

Still, if you think about it, after hundreds of years of formal, typographic experimentation on the page, you would assume that we must at some point have exhausted the possibilities. Someone will come around, though, and disprove this, I'm sure. Tibor Kalman thinks otherwise when he states in *Eye* that "People haven't started fucking with the printed page in a serious way yet..."¹ Picturing what has

1. Tibor Kalman interviewed by Moira Cullen in *Eye* no.20, 1996, p.16.

passed before us, however, I cannot for the life of me think of what it could be that hasn't already been done. Actually, one could argue we reached that saturation point quite some time ago. Anything in print that appears new today can be considered a variation on age old themes. Purely from a formal point of view, that Layered Thing was fairly well explored by Piet Swart and Wolfgang Weingart. That Anti-Mastery Thing was pretty well exhausted by Fluxus and Punk, that Deconstructivist Thing was long ago mastered by just about everybody from Apollinaire to Edward Fella and that Illegible Thing was difficult to top after Victor Moscoso and Wes Wilson were done battling over who could make the reader more cross-eyed. The only significant contribution introduced to graphic design in the last 10 years or so, as Laurie Haycock Makela once pointed out, might have less to do with anything visual than with **how** design is produced and **who** it is produced by. While the idea of the Next Big Thing is ludicrous to some, it's obvious that many hunger for it. Having documented, for a while at least, one such Next Big Thing, our magazine continues to receive inquiries from journalists and critics alike curious what the next Next Big Thing might be and where to find all the young energetic designers doing **crazy new things**. You can smell the desperation – with the absence of the Next Big Thing, what do they write about?

But let's imagine for a second that there will be no Next Big Thing in design. At least not for a while. Nothing to catch the attention of the design press, to sweep all the design awards, to receive all the lecture invitations, to function as a source of inspiration and discussion for all. Here's an idea to fill that void; we can try our hand at judging design by its content, by the ideas and messages that it attempts to communicate. Imagine design competitions picking winners based solely on the value of what they communicate, instead of how they communicate. The moral, ethical and political biases of the judges would come to the fore, for sure, but no more or less than the formal biases of judges who rule competitions now. Design would be discussed only as it affects the message. For instance, a submission could be considered of great public value but would not win an award simply because the design, although formally stunning, obscured the message. What would the design annuals look like then?

Of course it will never happen, because designers are visual types who have a tendency to either obsessively reduce or overly complicate the ideas of their clients, often without much concern for what is actually communicated. It is not that designers are insensitive or disinterested in the social and cultural functions of the messages they give form to; it's just that they don't always see the necessity (or have the opportunity) to integrate their personal ideologies into their professional work. They enjoy giving form to ideas. If designers were made of ideas, they'd be their own clients.

The World Wide Web is often hailed as the Next Big Thing in graphic design, but it's a problematic environment for graphic designers. One problem is that it has limited graphic possibilities. The coarse resolution of the computer screen, the inability to

fix layouts and typefaces, and the overpowering presence of the browser's interface all restrict the designer's ability to impart a specific visual character to a Web site. These also restrict the designers' ability to leave their signature imprint, which is even more problematic, since for many designers this is the single most important asset of how they market themselves. With the absence of the stylistic choices usually available in print, many designers will refrain from getting involved, while others, by hook or by crook, will try and bend the medium to fit their personal preferences for typographic expression and style. That's why so many Web sites look like what designers do in print but applied to the screen.

If there were ever an opportunity for graphic design to be more involved with content, the World Wide Web is it. With the computer functioning as the great visual equalizer, content instead of form is what ultimately may come to differentiate and qualify Web sites. However, according to my own assessment regarding the value placed on content within graphic design, judging a Web site on the strength of its content will not soon gain popularity, at least not within the narrow world of graphic design. Unless, of course, you expand the notion of what graphic design is. Which brings me back to the future of graphic design.

Whether or not designers will be able to make the transition from print to screen and whether or not the technology will ever deliver on the promise of seamless multimedia for everybody remains to be seen. But as we ponder the question of how graphic designers will cope with the seemingly inevitable changes ahead, we should not lose sight of what we're trying to accomplish. The purpose of what we do as designers will remain fairly basic: to communicate as effectively as we can those messages and ideas that we most care about. Having the option to do this differently and with more pomp and circumstance than before raises interesting questions not just regarding *how* but also *why*.

Writer Paul Roberts's observation that "The irony of the information revolution is that consumers neither like nor expect long, densely written texts on their computer screens"² suggests a radical shift in people's reading habits. This shift has long been contemplated by designers and critics alike concerned with how to best address the reading habits of future generations raised on MTV and video games in an era of increasing information overload. This is problematic, however, since I can't help but wonder why, as graphic designers, we should concern ourselves with pleasing readers suffering from short attention spans. How are we certain that by catering to their diminishing interest in linear reading and by relying on the power of images and sound bites as an alternative, that we actually increase such notions as comprehension and cognition?

As a result of my own interest and experiments regarding how to best aid the reader, I've become increasingly unconvinced about the power of images to tell stories and the value of open-ended narratives. Knowing where to apply such means is crucial.

2. Paul Roberts, *Virtual Grub Street* in *Harper's*, June 1996, p.71 (Reprinted in this issue of *Emigre*, p.64).

When viewing Elliott Earls's entertaining enhanced CD, *Throwing Apples at the Sun*, I enjoy the fact that I, the reader, can construct my own meaning from the seemingly disparate elements of image, sound and text. It is the very purpose of this project. When reading an essay, on the other hand, I crave for knowing what the author means so that I can learn and respond and ask specific questions if necessary.

When Louise Sandhaus, in *Emigre 36*, practices what she preaches and designs her essay *Click* in a manner that aspires to the non-linear, multi-level environment of the World Wide Web or CD ROMs, the result is a dynamic orchestration of text and images that subverts the conventional make-up of the page. Whether it functions as intended depends on who you ask. As a designer I'm drawn in by the curious visual presentation, but as a reader I'm unsure about sequence and often lose the thread of the writing due to the many distractions and options vying for my attention – not unlike when I'm surfing the World Wide Web or scanning a CD ROM.

In *Emigre 37* both designer Stephen Farrell and writer Steve Tomasula make eloquent arguments to support the notion of using animated texts and images to subserve reading and enrich meaning. Theoretically it holds water and I want to believe they are right because their work is so shockingly beautiful. But when I try to actually read their short story *TOC*, the experience is not as smooth as I had hoped. The story is layed out with distinct visual gestures, but I'm unclear how to read them or what the authors mean. I'm uncertain how to fill in the gaps or make the connections. Is it my fault, as a reader, that I don't understand? Or is it the authors'? Or does it matter at all?

In *Emigre* we have published many such theories and experiments, but their applicability in the real world, besides functioning as the Next Big Thing, has proved to be limited. This is exemplified by designers such as Katherine McCoy, Jeffery Keedy, Ellen Lupton and J. Abbott Miller, who are often presented as the key protagonists and apologists for the new theories that have inspired recent design trends, but who in reality create designs that apply only to a minimal degree the theories that so outrage its critics.

Shooting holes in the new theories, of course, is easy, since they are usually general in scope and allow for different levels of interpretation, depending on the job at hand. McCoy *et al* demonstrate time and again that they are extremely skillful at implementing their theories. There are few books out on the market that more brilliantly combine text and image and in the process truly aid reading and extend meaning, than the books created by these designers. And the books look far more traditional than the theories that inspired them.

Instead of nipping the theories in the bud, the critics should try their hand at how these ideas trickle down to the mainstream and are applied indiscriminately and irresponsibly. The opening essay in David Carson's book *The End of Print* would be a good place to start. To justify his typographic aerobics on the page, Carson often refers to the changing reading habits of the audience and borrows from the theory that if you engage the readers and make them work at decoding the text, they will

better remember what they read. Granted, it did take me quite a bit of work to figure out that the sentences in the essay needed to be read from bottom to top. But what I end up remembering about the essay is not so much what I read, but how difficult it was to read it at all. This type of work, as Andrew Blauvelt suggests, has less to do with redefining the notion of readability or literacy than with creating product differentiation and establishing the personal style of the designer.

But if designers have a tendency to apply their signature styles willy nilly to whatever commissions come down the pike, design critics often tend to paint with a rather broad brush to establish their holier-than-thou agendas regarding the social responsibility of the designer, the public good, fellow readers and other such stuff. The new theories, as some critics claim, have no interest in such noble causes. However, when voicing their objections regarding the new theories and the work it has spawned, the critics conveniently steer clear of addressing specific designs, and instead use bodies of work such as Rick Poynor's anthology

Typography Now: The Next Wave. These anthologies present anything but a unified collection of work or theory. They consist, for the most part, of posters, covers and other commercial, experimental and student projects especially short on text, big on image, and particularly suited for reproduction in small format. Here too, besides functioning as the Next Big Thing (as the book's title claims), the work can hardly be considered as serious research addressing the needs of future communication modes. But for the critics, who rarely judge designs within their specific context, they serve perfectly in pointing out all that is wrong with today's empty, self-centered designerism. This is usually followed by bizarre acts of overextension leading to conclusions that the new theories are not concerned with society's more mundane yet invaluable means of communication such as novels, educational texts, timetables, instructional manuals, application forms, etc.

If the new theories are not much concerned with these, it is because they acknowledge that the old theory provides most of the answers for these applications. What the new theories are concerned with is that the old theory does not properly address the new media and the multiplicitous environments and audiences that graphic design now both serves and is comprised of. Which brings me back to the Next Big Thing.

If the new theories have generated disappointing results concerning conventional print design, then the old theory has shown little ability to adapt to the new environments of electronic publishing. For instance, if legibility is a social concern, why then have our most respected typographers largely ignored issues of typographic excellence on the computer screen? As we're entering the information age, which will most likely play itself out on low resolution monitors, you can either ignore what is going on around you and then later complain about the irresponsible behavior of today's designer and the general downfall of literacy and all that, or you can help provide a solution. For the graphic adventurers among us, this probably means having to abandon certain personal expressive preferences,

and for our most learned typographers, it might mean adapting sophisticated typographic traditions to fit the still primitive world of electronic publishing. Somehow this combined knowledge must be able to generate a visual language capable of being both legible and engaging.

The following might seem paradoxical, because at *Emigre*, for the short term at least, as we're trying to deal with the new technologies that surround us, we see more use for the teachings of the young Jan Tschichold than the writings of, let's say, Frances Butler. While we're being primed for sensory overload, the reality of electronic publishing still consists of system crashes, tedious downloading problems, links gone dead, incompatibility and the many stylistic restrictions described earlier. The simplicity and social concerns of Tschichold's ideals, that "communication must appear in the briefest, simplest, most urgent form,"³ as outlined in the text *Elementare Typographie*, are far more practical than the multi-level, interactive, hypertextual and audiovisual forms of communication that, according to Butler, will better match the "fluid, additive, non-syntactic, and above all, extremely sophisticated thought process that are the natural birthright of all humans."⁴

3. Published in *Typographische Mitteilungen*, no.10, 1925, pp.198,200

4. Frances Butler, *Retarded Arts: The Failure of Fine Arts Education* in *AIGA* Volume 30, 1995, p.30

* While we had hoped to publish various lectures and writings from the 101 conference in this issue of *Emigre*, the scope of the writing demanded more space than was available. Only Lorraine Wild's lecture appears here in its entirety. Additional material from 101 will be published in the future. We extend a special thank you to Louise Sandhaus for inspiring us to further explore the issues raised at 101.

Before you bury Gutenberg...

The Gutenberg Elegies: The Fate of Reading in an Electronic Age

By Sven Birkerts

Faber and Faber

Reviewed by Diane Gromala

It is claimed that university students, generally referred to as Generation X, are less able to read, less well read, and have shorter attention spans. I'd like to agree, but ultimately cannot. My own students, it is true, often chafe or seem to feel real pain when required to read serious literature. They squirm after 20 minutes of class. They seem to lose all design sense when they first encounter new technologies. And yet, these same students also seem to bear an innate and consummate sense of critically deciphering, or reading, film and video. They sit in front of the flicker of computer screens far into the night, held in rapt attention. The design students most involved with multimedia invariably become the ones most obsessive about craft, the sense of touch, bookbinding, and bibliophilia. As our culture reconfigures itself in response to the electronic technology it has given rise to, I grapple with the notion that these students are less literate. Is literacy dependent upon the primacy of serious literature? Or are we witnessing a shift toward a literacy of a different sort, one which includes other media and meets other cultural needs?

It is difficult to know just what to believe about technology. The barrage of over-enthusiastic technology hype appears to consume the media, just as overwrought neo-Luddites sound reactionary alarms. Through this, one looks for sober analysis, for a reasoned, critical skepticism. This is the promise of Sven Birkerts's cautionary tale, *The Gutenberg Elegies: The Fate of Reading in an Electronic Age*. It is unfortunate, then, that this is not what is delivered, because Birkerts makes provocative and important observations about the nature and pleasures of reading, why reading matters, and how technology impacts reading and thus threatens our cultural heritage.

Reviews of this book range from laudatory to dismissive, usually depending on the affiliation of the reviewer. Nonetheless, the book is popular and Birkerts receives more than a little media coverage. Hurling anecdotal provocations and situating oneself squarely at one end of a spectrum is a sure way to be heard, or so it seems. Birkerts himself may have said it best: "Simply put, the more faithful you are to

your truth, the more deeply you see into the dynamics of what is taking place on all sides, the less of a chance there is that your version of things will get published, or, if published, bought and read." (207) Although Birkerts references Marshall McLuhan, Walter Ong, Jean Baudrillard, and Walter Benjamin, this is not a scholarly book, and the issues are not dealt an even hand. Nevertheless, this is a highly accessible book, and Birkerts poses urgent questions that need to be addressed.

The Gutenberg Elegies is divided into three parts and coda, or summary. In the first, *The Reading Self*, Birkerts persuasively renders the pleasures and importance of reading. He recounts his development as a reader, bookseller, and writer in a deeply subjective, idealized, and compelling, if uncritical manner. Something in Birkerts's tone sounds like the nostalgic yearnings of a mid-life crisis, of a man caught in the midst of melancholic, conservative backlash. Still, anyone who can be so deeply drawn into the fictive world as to be terrorized by cartoon dalmations can't be all that bad. Thus, this section of autobiographical reverie is the most engaging. Here, Birkerts is a convincing witness to the individual and cultural importance of reading, and the human desire to make meaning.

In the second part of the book, *The Electronic Millennium*, Birkerts moves from reverie and mournful dirge to a weakly constructed attack against electronic technology. What weakens Birkerts's argument is his superficial knowledge of technology, as well as the argument's construction. It is dependent upon subjective musings that too quickly and uncritically slide into all-encompassing assertions, ungrounded and unsubstantiated by evidence or sustained argument. However, this part of the book still ostensibly attends to both the positive and negative effects of electronic technology. In the book's third part, *Critical Mass: Three Meditations*, Birkerts's arguments turn to invective, gather steam and include gloomy musings on the humanities, universities, and postmodernism. The coda, aptly titled *The Faustian Pact*, concludes with Birkerts's ultimate stance on electronic technology: "Refuse it."

Birkerts is at his best when he discusses the nature of reading. He describes the internal state evoked by reading in terms of an altered state of awareness, the phenomenon of being transported to another place, of merging with the author's consciousness. According to Birkerts, "...we make another person's words our own not simply by looking at them but by apprehending, inhabiting, and reinscribing them." (112-113) Here, Birkerts's subjective musings appropriately demonstrate the phenomenon he discusses. He goes on to describe the relationship of reading to culture: "Our entire collective subjective history – the soul of our societal body – is encoded in print. Is encoded, and for countless generations been passed along by way of the word, mainly through books." (20) This is among the first instances of the sort of sweeping generalizations that degrade Birkerts's more trenchant observations.

First, Birkerts's use of *our* and *entire subjective history* are what have been disputed in the last thirty years of humanities scholarship, and to some degree, political discourse. This is in terms of whose history is transmitted; what types of history

are transmitted; the nature, conditions, and change of encoding and of transmissibility; and the status of history and literature themselves. Birkerts neatly sweeps this under the carpet, or treats it with derision. Second, the countless generations can indeed be counted because Birkerts privileges the novel as the most important form that the book, thus cultural transmission, assumes. Before Gutenberg's invention and for at least two hundred years following it, reading was restricted to the few. Generally, this was the wealthy, clergy, and village scribe. During this time, the shift from an oral culture to a written one was an arguably long, slow process, and the two were inextricably bound. The time, then, that Birkerts seems to be discussing – in terms of a relatively widespread literacy and the emergence of the literary form of the novel – is the last 300 years. Third, Birkerts privileges the book as the highest form for the transmission of cultural meaning.

All other embodiments of language, from the visual arts to theater, film, music and poetry, are subsumed. While precious few would deny the importance of literature, his assertion of its primacy is open for debate. Finally, conflations abound and obscure his ideas. Language is conflated with literature (and only serious literature), literature with the canon, and postmodern culture with postmodern aesthetics. This type of confusion renders the cause and effect among language, reading, electronic technologies and culture indistinct.

Nonetheless, Birkerts asks vastly important questions about the fate of reading in an electronic age. To his credit, he spends time with the cultural context in which reading and electronic technologies are situated. He views this culture as one that is in dissolution, finding that "The situation is total and arises from systemic changes affecting the culture at every level." (27) "Since World War II we have stepped, collectively, out of an ancient and familiar solitude and into an enormous web of imponderable linkages. We have created the technology that not only enables us to change our basic nature, but that is making such change all but inevitable. This is why I take reading – reading construed broadly – as my subject. Reading, for me, is one activity that inscribes the limit of the old conception of the individual and his [sic] relationship to the world. It is precisely where reading leaves off, where it is supplanted by other modes of processing and transmitting experience, that the new dispensation can be said to begin." (15)

Birkerts refers to our current cultural condition as electronic postmodernity and sees it in terms of an economy of gains and losses. Whatever gains we experience as the outcome of electronic technologies will necessitate losses. For example, we may gain global interconnections and access to information, but we lose what Birkerts refers to as deep time or duration. These are the long periods of time necessary for in-depth reading, reflection, and ultimately, wisdom. In his view, electronic technologies are inimical to duration and reflection: "[circuit and screen] are entirely inhospitable to the more subjective materials that have always been the stuff of art. That is to say, they are antithetical to inwardness." (193)

The gains: "(a)...a global perspective that admits the extraordinary complexity of

interrelations; (b) an expanded neural capacity, an ability to accommodate a broad range of stimuli simultaneously; (c) a relativistic comprehension of situations that promotes the erosion of old biases and often expresses itself as tolerance; and (d) a matter-of-fact and unencumbered sort of readiness, a willingness to try new situations and arrangements." The losses: "(a) a fragmented sense of time and a loss of so-called duration experience...; (b) a reduced attention span and a general impatience with sustained inquiry; (c) a shattered faith in institutions and in the explanatory narratives that formerly gave shape to subjective experience; (d) a divorce from the past, from a vital sense of history as a cumulative or organic process; (e) an estrangement from geographic place and community; and (f) an absence of any strong vision of a personal or collective future." (27)

The sense of alienation, shattered faith in institutions and explanatory narratives have deep roots, going as far back as the Enlightenment. Though electronic technologies may exacerbate this, Birkerts fails in large part to acknowledge this. Where others see electronic technologies such as the Internet as positive reaffirmation of cultural connection, Birkerts sees it as a threat to individual subjectivity. This *hive life*, in his view, is a negative process of social collectivization or societal totalism. Further, Birkerts pits electricity against inward reflection, claiming that the nature of electricity is immediacy, not duration. He also pits the techno-web against democracy because, he claims, this technology of *hive life* threatens individualism, subjective self-awareness. Although Birkerts proposes his economy of gains and losses, an ostensibly balanced view, he clearly laments the losses, concentrating on the empty half of the glass. In his view, the losses are irretrievable and overarching.

Underlying Birkerts's argument is a sort of technological essentialism and determinism. That is, Birkerts tends to see technology as having an essential nature that is, or somehow has grown, outside of human influence. Although he posits a relationship between technology and culture, the relationship remains obscure. This is somewhat related to the bumper sticker that reads, *Guns don't kill people, people kill people*. We create the technology, and are responsible for how it is valued and utilized. If, as Birkerts claims, we are wired for meaning, then one is compelled to ask if we aren't also wired for creating technology. Both are characteristic of human history and do not necessarily stand in opposition to each other. Birkerts's determinism is exacerbated by his use of sweeping statements. "Ten, fifteen years from now the world will be nothing like what we remember, nothing much like what we experience now." (193) "We will all live, at least partially, inside a kind of network consciousness." (202) "We will still wear clothes and live in dwellings, but our relation to the space-time axis will be very different from what we have lived with for millennia." (193) This is the sort of rhetoric that Birkerts derides as characterizing those who advance technological progress. It smacks of the AT&T commercial: *YOU WILL*. What is at issue here is Birkerts's insistence that we have all quietly acquiesced, and that there isn't enough debate about our

acceptance of these technologies. He wishes to raise this debate, standing against the onslaught, but provides us with no other option than to **refuse it**.

One has to wonder just when and how this condition will occur on a global scale, when half the world's **households** currently do not have telephones, including a growing number (currently, 5.7 million) of Americans. This is not to deny that a sort of technological ubiquity doesn't exist with surveillance satellites, television, and a host of other electronic technology, or the type of simulation that Baudrillard describes. Rather, it is to raise the issue of so-called information-poor, or technological have-nots. It is also to point to a serious flaw in Birkerts's argument: he lumps all electronic technology, from fax and answering machines to broadcast media and computers, together. He does not address the possibility that electronic technologies may be the outgrowth of Gutenberg's technology, or that the written word itself is a form of technology, as others argue, of the spoken word.

Birkerts invokes McLuhan and insists that **the medium is the message**. He repeats commonly understood characteristics of non-linear hypertext, paying particular attention to its ability to **level** information and rip it from its more familiar contexts. This is an important point, and one that deserves an extended analysis that is not provided.

He delivers a convoluted discussion of the notion of physical presence, relating it to Benjamin's **aura**. Somehow, Birkerts argues, the materiality of ink on paper is superior to text on a screen. But ink on paper itself is the result of the very technologies of reproduction that Benjamin discusses as lacking an aura, an aura of the hand of the author. Of course, Benjamin was discussing art, not literature. What is sticky here is that Birkerts does not raise the possibility that language, influenced by a particular medium, transcends the media of print, screen, or human voice. He also does not raise issues that Benjamin might, such as the effect of the lack of an aura, and of the new place of printed literature in the larger political and economic contexts. To be fair, Birkerts does discuss the social context of print and electronic text. He maintains, however, the strict division of high and low, (or mass) culture, thus amputating the probable direction to which Benjamin would have lead. It is precisely here that much of the relevance of his argument for design may have resided: the change in the status of certain forms of cultural transmission in electronic postmodernity.

The one hope that Birkerts holds is for a backlash, or backdraft. "The efficiency of great circuits – which we will soon enough all be hooked into and serving – is a direct function of their abstractness... Adaptation will not come without some storms of cognitive dissent." (208) He is certain that electronic technology leads, if not to the death, then certainly to a diminished authority of the author, the disintegration of the canon and of literature, to a crisis of meaning and a repression of individualism and the human drive to make meaningful narratives. Therefore, Birkerts predicts three possible outcomes: a return to religion, a rush to therapy, or a "genuine resurgence of the arts." Presumably, Birkerts means a resurgence of

traditional, non-electronic arts.

Birkerts concludes his book with a coda, invoking the Faustian pact. In the end, it is an argument between technology and the soul. (211) He refers, of course, to the soul of the individual, and not the soul of a collective. Again referring to Benjamin, he "acknowledges how changed aesthetic engagement...alters the ways in which we see and understand reality." (226) Birkerts questions the long term cognitive effects of electronic technology, laments the incipient loss of serious reading and serious literature, and bemoans the lack of existential questioning. "Do people understand that there may be consequences, possibly dire, to our embrace of these technologies?" Not strongly enough, no. It is an insistent concern, yet one which has haunted the history of technology. Here, prognostications generally take a 90 degree turn from what is predicted, and technology evolves in unforeseen ways. Birkerts feels that he is being "gradually coerced into living against my natural grain, forced to adapt to a pace and a level of technological complexity that does not suit me..." (28) Yet he does not take his own yearnings to refuse it to the ultimate conclusion, at least not in terms of his own daughter's repeated viewing of Disney video and fast-food action figures. He refuses an on-line account, and refuses to use a word-processor (a typewriter is okay), though he does participate in on-line and broadcast interviews. Perhaps this is his point – it seems inescapable. He warns us of the negative consequences of electronic technology and the demise of literature. He predicts the future but does not point toward how we may change it. He seems to indicate that the damage is done, the progress inexorable. Birkerts is passionate. He asks important questions. Unfortunately, they are mired in generalizations and obscure reasoning.

Seattle, home of Microsofties and aerospace technologists, is a place you may expect to be populated by people who have disavowed reading. In lieu of reading, you may expect them to spend time in some sort of virtual experience in this gloomy (rainy at least), brave new technological world painted by Birkerts. And yet, I have never witnessed a populace so obsessed with reading: in thriving bookstores, at home, on the bus, at the beach. Poetry slams are among the hippest nighttime activities of the young. The public library is often cited as the best pick-up joint in town. It is common to see homeless people lined up outside of the Seattle Public Library in the morning. The first thing they do is use the rest rooms. The second thing they do is use the Internet access terminals to surf the net. It is not clear whether these readers consume serious literature, or whether they experience deep self-awareness as the result of their reading. Perhaps they only experience the superficial engagement Birkerts fears. Perhaps they are quietly acquiescing to electronic technology. Is technology the cure or cause of societal ills? Technology is what we, implicated as we are in the forces of late capitalism, determine it to be. Should we question the blind acceptance of technology? Absolutely. Deeply.

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That was then, and this is now: but what is next?

By Lorraine Wild

The following essay is based on the transcript of a talk that I gave at **101: The Future of Design Education in the Context of Computer-Based Media**, a symposium organized by Louise Sandhaus and presented at the Jan van Eyck Akademie in Maastricht, The Netherlands, in November of 1995. It is highly speculative, and reading it now, I think that some of the conditions that I describe have already shifted, but that is the nature of the speed of change that confronts us. I was simply trying to capture and describe the moment that we educators and practitioners are in right now. (You blink, and it has changed). I wish to thank the Jan van Eyck Akademie for giving me the assignment and the time to collect and record my thoughts.

I'm standing here not as an authority on multimedia or design education, but from the position of working inside of design education for twelve years, and connecting it with my own experience as a student from the mid-70s through the early 80s. That, and the context of my experiences at Cal Arts, and my ongoing experiences as a design practitioner in Los Angeles, have had an impact on the way that I see the future of work in design. I can't pretend that what I say will apply to all graphic design educators and practitioners everywhere. But in the U.S., Los Angeles is usually regarded as the place where both good and bad things happen first, because Californians are crazy and will try anything. Yet, usually, what happens there ends up happening everywhere else, sooner or later. So today I'm just speaking from my own experiences, but on the other hand, all I can say is: **you'd better watch out** I'd like to start by describing some recent observations that have affected my thoughts about what's going on in the profession that we are educating designers to enter.

The bigger picture

Recently the *Los Angeles Times* featured an article about one of the many invisible wars of rivalry between the metropolitan areas of San Francisco and Los Angeles, over which one would achieve economic domination in the new field of multimedia.¹ The gist of the article was that northern California held the lead in hardware (as in technology) development and financing, and that southern California held the lead in software (as in content) and its financing, and that it was not clear which area would end up drawing the most benefit from the phenomenal growth attached to the new technologies. But what caught my eye was that the state tax rolls already

1. Multimedia's a new L.A.-S.F. Grudge Match. Will the Recently Matched Industry Nest in Northern or Southern California? by Amy Harmon. *L.A. Times*, 10/1/94, p.A-1 and Hollywood and Technology: Welcome to Silwood, Will the Convergence of the Creative and Technical Lead to a Jobs Revolution? by Amy Harmon, *L.A. Times*, 9/12/95, p.J-4.

had hundreds of businesses registered as multimedia developers. A few years ago, Nicholas Negroponte of MIT's Media Lab predicted that the movie industry would be "the smokestack industry of the 90s,"² and the report in the *Los Angeles Times* reinforced this idea, claiming that the infrastructure dedicated to telling stories could contend, economically, with the infrastructure for delivering the stories. In fact, what the article summarized was the interweaving of Silicon Valley and Hollywood into a blended economy, and that Siliwood was already regarded as a source of economic regeneration in California.

This is the environment that ten or so undergraduates and six or so graduate students from Cal Arts will walk into this May, and on into the future...

High anxiety

In October of 1995, the American Institute of Graphic Arts held its biennial national conference in a hotel in Seattle. Previous conferences have consisted of lectures by various graphic design world heavyweights of their latest work, or presentations by large-scale clients. Other issues are covered, such as history, professional practices, ethics, and design education, but generally, AIGA conferences in the past have functioned as professional love-fests, where the main goal was the (at least temporary) glorification of graphic designers by graphic designers. But a new more serious generation leads the AIGA now, and the 1995 conference was advertised with the following text: "We all know that design is going through a period of unprecedented change. Is the profession you care about passionately on the verge of a renaissance – or extinction? Is the business world finally beginning to appreciate the value of what you do? Or is public access to technology going to put us all out of business?"³

The Seattle conference was different. First of all, there were no general presentations by graphic designers of their current visual work and none of the speakers who addressed the topic of the future of the profession used any current work by other graphic designers to illustrate their notions of where the future was leading. In other words, there was a real disconnection between the work that graphic designers specifically produce now – good, bad, or ugly – and the preoccupation with the larger question of what we might be doing in the future.

One of the most important presentations of the conference was a dialogue on the main stage between Bill Drenttel, partner of Drenttel Doyle & Partners, a very successful design consultancy in New York, and Nancye Green, partner of Donovan and Green, an equally successful New York design office. They did not show any examples of their work, but spent 40 minutes discussing how absolutely confusing and challenging it was to be running a large design consultancy in 1995. The

2. Stewart Brand, *The Media Lab: Inventing the Future at MIT*. Penguin, New York, 1987. p.5
3. Ad in *The AIGA Journal*, Volume 13, 1995

conditions that they described so persuasively could be characterized as follows:

- the problems that clients were bringing them had become exponentially more complex, in part because of the range of possible media that presented themselves as possible solutions;
- audiences themselves were more complex, split into micromarkets; and/or scattered globally;
- they were being asked to address these complex audiences; yet, paradoxically, the multimedia audience had to be seen as a large group of audiences of one;
- earlier models for staffing and managing and organizing a design practice didn't seem appropriate to these challenges, which meant that designers were now faced with the challenge of organizing teams, often including expertise from outside of graphic design, to adequately cope with their clients' projects;
- research was hard to define and hard to bill for;
- despite the delight in producing images, designers had to recognize that making visual things was now only one way of working in design;
- a lack of credibility was so pervasive as a cultural phenomenon that trying to create genuine communication through a haze of excess marketing was making life more difficult for everybody;
- and finally, the constant pressure of time continued to mitigate against the leisurely solving of any of these problems.

I thought that Drenttel's and Green's presentation was a defining moment in contemporary American graphic design, although whether or not it was recognized as such by a large percentage of the audience in Seattle is debatable. Possibly, it made many of the designers in the audience very uncomfortable because it was such a definitive, intelligently expressed description of not knowing. Neither Drenttel nor Green delivered their message hopelessly, but by setting aside the seductive images of their accomplished work in favor of confronting the massive uncertainties of practice as it is experienced daily, it was perhaps the most painfully honest presentation that the graphic design profession had seen in a while. (Certainly just as honest a moment as when the audience, who obviously wanted to celebrate their embrace of technology, their plucky willingness to accept change no matter where it brought them, applauded wildly as a designer at Adobe Systems showed some video footage of herself destroying a Macintosh computer with a sledgehammer.)⁴

Anyway, memories of Seattle were still fresh when I encountered this statement by Michael Rock of the current Yale design faculty in a recent issue of the *AIGA Journal*: "That contemporary design education has been thrown into a state of confusion both aggravates and reflects a pervasive professional confusion. It is inherently impractical to fully prepare students to work in a field that has so little sense of its immediate future or professional position."⁵

4. *High Anxiety*, presentation at the Seattle AIGA conference by Luanne Seymour Cohen of Adobe Systems.
5. Michael Rock, *Introduction*, *AIGA Journal*, Volume 13, No.1, p.12

This statement took me aback; it's quite extreme! Yet all the evidence of a severe realignment in design practice has been piling up. For two years now I have witnessed a steady acceleration of change — an expansion of the range of technical possibilities, which affects the nature of what designers aspire to do, and what they fear being denied if their skills somehow fail to fit the potential of the new media. These possibilities have been anticipated for years, since the computer started being integrated into graphic design as a production tool. It was so easy to say, "Oh, it's just another tool" (or, more compellingly, "It's just a really fast idiot") as long as it was simply being used to replicate earlier manual tasks. But now, new media expand the problem of communication to encompass dimensions of time, sound, motion — and, suddenly, the **graphic** in graphic design seems constrained or parochial. The two-dimensional expertise of the graphic designer appears to be a professional liability rather than a ticket to greater participation in the communication of the future. And the new media tools open up the possibility for communication to a radically expanded number of people, challenging the fragile claims to authority that designers have worked so hard to establish. As Michael Rock stated, the inter-relationship between practice and education cannot be circumvented or denied. To build a future in the face of these challenges to the definition of graphic design practice, I think we have to look with somewhat of a cold eye at the source or sources of our current paradigms of education and practice that come from the past.

Way back in the 80s

In 1983, I was asked by the Society of Typographic Arts (now the ACD) to write an essay on the ideal design education.⁶ At the time, I was teaching at the University of Houston in Texas in both the architecture and the graphic design departments. I had graduated from Yale University the year before, and while I was there, buried under the burden of completing my master's degree thesis, I found myself envying the quality of the general education that the younger undergraduates were receiving. There were limitations on the amount of specialization that any bachelor's degree student could take — and instead of holding them back, it seemed to enable them to communicate their ideas and intentions with the rest of the world.

Of course the arguments exist that an elite institution like Yale is merely a finishing school for privileged students already destined for leadership positions in society, but like a lot of other American institutions, Yale had diversified their student population from the late 60s on through the admittance of women and an increased percentage of minorities. The undergraduate student body did not fit the cliché of

6. *More than a Few Questions About Graphic Design Education*. *The Design Journal*, Volume 1, Number 2, pp 8-10

the old Ivy League, and still the education was impressive. The alumni newsletter chronicling an endless list of accomplishment in all fields seems to indicate that the educators at that university were doing something right.

So what was it? After looking at it really closely, and after going on to teach at a state university that had incorporated more specialized job training in lieu of traditional academic development under the rubric of a more pluralistic and pragmatic definition of an undergraduate curriculum, I could see that it was the Yale tradition of endless writing and reading, requirements across a general field of subjects, and most importantly, a constant stress on intellectual inquiry and curiosity that sustained graduates far beyond their years on the campus. It seemed clear to me then, (and that's what I ended up writing about in 1983) that the best thing an undergraduate design education could do would be to embrace that serious commitment to cultural generalism, because designers needed to be literate and intellectually flexible if they were going to be able to communicate with any meaning, energy or authority in their society and culture.

I should add right away that this spirit of inquiry was notably missing from my own graduate education in the very same university. In 1980 the master's degree program at Yale was one of the last bastions of late modernist design rigidity, enforced with discipline; all rules and mannerisms combined to produce an exterior facade of professionalism, no questions asked. I will always remember when a visiting tutor asked us graduate students to describe what it was that was important to us as designers. Everyone responded mechanically with clichés about problem-solving and communication, when in fact, methodologies of communication had never been discussed; we were really most anxious to complete our typography problems in the blandly abstracted Swiss style that our faculty deemed correct.

It was true that this style, which passed for well thought out graphic design at Yale and other design departments in the late 70s and early 80s, was also the style of corporate America. If you mastered it, you were guaranteed employment in any one of a score of offices on the eastern seaboard. Though it was certainly never articulated as such, the intellectual preparation of students as communicators had become secondary to a sort of vocational education limited to the production needs of the profession, or at least what the profession thought that it needed, in the short term.

Even before the 80s

But a hallmark of modernist design education in the U.S. has been its see-sawing relationship to the field of practice. There was no academically sanctioned design education in the U.S. before the arrival of various European designers associated with the avant-garde, like Moholy-Nagy, who brought the New Bauhaus to Chicago (independent for a brief while, eventually finding a home at the Illinois Institute of Technology), or Gyorgy Kepes at MIT, or Joseph Albers, first at Black

Mountain College, and then at Yale. The work of these educators a mere sixty years ago began the development of a professional design pedagogy in the U.S., connecting education with the modernist promise of social and cultural amelioration through practice.

I feel queasy about the series of broad generalizations I am about to make in an attempt to summarize the evolution of this modernist ideal in the U.S., because I don't want to make it seem simplistic, but for the sake of brevity, please bear with me:⁷ The big shift in design teaching that was brought by this first generation of émigrés to the U.S. was a move away from the constant production of visual novelty, or restyling as a *commercial art*. They also expanded design activity from aesthetics to encompass a conceptual operation, where design projects and problems in two or three dimensions were generated by an internal analysis, without preconceived notions of solutions, from inside the problem to outside the surface. Form would follow function, which was understood in graphic design as meaning. This new idea brought about an explosion of creativity to a field that had not been noted for a great deal of conceptual innovation. But this new approach was also accompanied by a very strong aesthetic of its own, which we are all familiar with, and which over time tended to shift from being a visual signifier for the conceptual basis of the project to becoming a stand-in for substance itself.

And the way *that* happened in the U.S. has something to do with the struggles of the first generation of designers who worked hard at promulgating the modernist project in the commercial/professional context of the U.S. after 1945, and who fought for recognition in that context. They found that a most efficient way to connect to their clients as consultants was to tie their own identity as *artists* and *individual creators*, or *stars*, to the work that they produced. Like movie stars or famous artists (figures more easily understood by commercial/popular culture), their work was increasingly championed on the basis of personal authorship (even if the work was actually the product of a 30-person office), rather than for its merits. This is not to say that there weren't plenty of meritorious projects; they just weren't sold or understood on that basis: not only by clients, but by the design profession itself.

By the time I was in design school in the mid-70s, the phrase *the star system*, describing the process of getting known for one's work on the basis of receiving awards, and building one's reputation and personal identity on that, was openly acknowledged by students with more than a bit of cynicism (and a bit of jealousy, especially during the 80s when even minor league stars were making so much money). This had its effect on design education, obviously. Since work that succeeded was presented as the result of individual genius, and since modernism could not be discussed as a style with conventions because it was alleged to be free of them and

7. For a more complete rendition of this story, see my essay *Europeans in America in Graphic Design in America: A Visual Language History* edited by Mildred Friedman. Walker Art Center, Minneapolis, 1989, pp.152-169

continued to be confused as a signifier for truth, graphic design curricula increasingly moved from the problems of truly conceptual practice to the induction into the modernist style, combined with the development of the personal ability to will one's work into correct and persuasive shape. There was a *blip* of time in the early 1970s in which this did not happen (and I will get to that interesting moment shortly), but otherwise the trajectory of design from a conceptual activity to a kind of compromised personal artistry in the service of commerce has been quite direct.

A major digression

The events that interrupted this trajectory, other than the *blip* that I have just mentioned, were the onset of semiotic theory, cultural criticism, postmodernism and to a certain extent, graphic design history as consciousness-raising in graphic design education. The influence of these theories (even when mistranslated or misunderstood by graphic designers) brought new life into a field that was in serious danger of terminal trivialization. Patterns in the production and consumption of public imagery began to be discussed, and the natural assumptions of the profession began to be understood as constructions.

Simultaneously, the number of graphic design students kept increasing. The number of designers kept increasing. Different kinds of people, such as women, gays, and minorities of all types, began to shift the profile of the profession. Students and teachers reading theory started questioning the basis for the values and hierarchy inside and outside of the profession. And around the same time that designers started perusing Derrida, these pale gray machines that made awkward looking typography were multiplying in their offices.

Things to come

To return to the *blip* of the early 1970s, which prefigured all of this, in a truncated way. In the U.S., the crisis of the late 1960s – which circled around opposition to the Vietnam War, the ongoing fights for civil rights and women's rights, the onset of assassinations and urban upheaval – had shaken the faith of so many people in the institutions around them. In graphic design, it was already evident that the attenuated rationalism of modernism was the style of the military/industrial/corporate machine. Looking for alternatives, young designers looked to the roots of early modernism, with its commitment to constant activist revolution, to reinvigorate their own efforts. An obsession with taking control of systems rather than being controlled by them became critical, and understanding systems became more important than aesthetics, momentarily. Buckminster Fuller, Marshall McLuhan, the *Whole Earth Catalog* (with its wry subtitle, "a catalog of tools") and the guerrilla TV collective Ant Farm were on many aspiring designers' reading lists, and it was assumed that both the tool of the future and the medium of the future

was... video. Those back-breaking porta-paks engendered dreams of a medium that would shake its audience out of complacency, restore spontaneity and democracy to the media, and turn passive spectators into active citizens. Video would provide an outlet to designers frustrated by the limitations and control of predetermined form. This was the same period when a fascination with problem-solving methodologies – brainstorming and all sorts of other analytical techniques – were also being explored as a way to short-circuit the easy assumptions of formalism. The politics of the time encouraged the spontaneous, *ad-hoc* and collective natures of these explorations. On the aesthetic side, the influences of Andy Warhol and Robert Venturi helped reinvent the way designers saw the pop culture environment that formed the context of their work. Hitting 30, the singular aesthetic of abstracted modernism was not to be trusted, and the stiff cultural hierarchy between *high* and *low* was beginning to crack. Though the modernist style was not fully abandoned at this point, graphic design teaching and practice was briefly energized by this moment of hippie modernism, where the conceptual problem was once again in the foreground. Designers dreamt of a utopia of connection to the community through the peaceful use of technology.

But... the porta-paks were too heavy, no one had time for real time video, and the dreams of revolution attached to local access cable TV fell out of favor when truly large scale cable companies offering round-the-clock presentations of old sitcoms clarified the situation that such access, in video or cable TV, was still inexorably one-way; passive, not the gateway to revolution.

By and large, graphic designers were not to pay attention to the role of technology in their futures until the pale grey boxes were completely ubiquitous. What was initially disguised as the distress over the Macintosh as a generator of typography (or a creator of instant graphic designers) has proved to be a much larger anxiety over the effect of the new media on the current conception of the design profession itself, and whether the constructs that have governed practice and education up to this point are even going to survive the full implications of the technology.

Too much to learn

When designers first began to notice that the use of the computer demanded that they now had to resume responsibility for details of production, there was immediate consternation that the trade-off for increased aesthetic control, and the constantly disappointed promise of increased productivity, had been to remire the designer in a practically premodern model of work – the sweat-shop. Of course, the flipside of that model was the premodern publishing operation, where editing, designing, printing and distribution could be collapsed into a simpler, less capital-intensive operation, full of potential. But merely mastering the technology seemed to overshadow the ability to pause and notice where the work could go.

Educators and practitioners were distracted by the whole new bag of necessary skills that greatly impacted craft: the ever-expanding number of software programs to master, added on top of all the older mandated skills and techniques. Intentionally or not (in fact, despite the best of intentions), the problems of mastering digital technology for print production tended to crowd out what little time was given over to the conceptual development of design in most curricula. Of course, talented teachers have always managed to insert conceptual development into the process of skill acquisition, and in fact that is what has prevented the teaching of design from being completely subsumed into this technological shift. But basically, for the last few years design educators have been faced with the conundrum best expressed by the classic Texan phrase, "trying to stuff twenty pounds of manure in a ten-pound bag." Or as Meredith Davis and Andrew Blauvelt stated more elegantly: "The synthesizing potential of the digital realm rejoins many previously discrete tasks, suggesting not only the problem of increased knowledge and skill, but also the potential for designers to entertain notions of authorship and entrepreneurial independence. Such demands for greater skill and knowledge will not be thought of as the burden and sole responsibility of the designer... instead, experience and knowledge will be gained through work and communication with others outside our discipline while activities such as 'creation,' 'production,' and 'distribution' become more fully integrated."⁸

How are graphic designers, at least as we currently prepare them, going to be able to go beyond the entertaining of notions of authorship and entrepreneurial independence into substantive participation in the production of this new media? Where will they gain the skills to collaborate with those who know what they don't? These questions tug at me as I see CalArts graduates go out into the world with the intention and ability to work in new media. Though there are tons of job opportunities for those students, it is not self-evident to the world out there that the skills of a graphic designer are critical to the success of new media projects. I also see the way that opportunities to work in multimedia come to practicing designers. Often, designers are approached with projects that have already been strategized, which may need a visual retooling after the fact. This doesn't contradict the already established model of the print designer providing the visual interface between the client and their intended audience. But it obviously frustrates the entire promise of the new media to break down the barriers between form and content (not to mention the old conceptualism that insisted on an idea behind the image); what use is it if graphic design is segregated to the application of form?

The new media have begun to reverse the processes that have led to the specialization of graphic design out of a field of general design practice. This threatens to tip

⁸. Meredith Davis and Andrew Blauvelt, *Building Bridges: A Research Agenda for Education and Practice*, *AIGA Journal*, Volume 13, Number 1.

our professional definition upside down. The contemporary identity of the graphic designer was only constructed after printing and typesetting technologies isolated the activity of planning and form-giving from both the development of content, and the actual production of printed matter. Modernist practice evolved from that industrial separation and the intensified **personalization** of conventional design activity in recent years can be seen as a continuation of those processes in the extreme. The identity of graphic design is constantly reified by its own pedagogies, practices, professional awards, journalism, and even history, which until now, focused on the visual presentation of printed matter. Whereas the problems and projects that constituted graphic design seemed so stable, multimedia brings additional dimensions of difficulty and complexity that are only peripherally related to graphic design practice as it is commonly understood. Suddenly interactivity and the design of interfaces, the connection between information and users, demands thought in terms that range from the industrial understanding of human factors to the theatrical culture of entertainment. A visual sensibility is a valuable thing to have, but it is only one sensibility; a good sense of timing and sound are now really important as well.

And ideas of what might be done with the new media are the most important of all.

While designers worry about their own qualifications or competency to make this work, anyone can get their hands on the technology; one project, and you, too, can be a **multimedia developer**. Hovering over all of this is the problem that there actually are different levels of skills (in understanding principles of programming, for instance), that affect the quality of work in ways that many designers just beginning to experiment with Director can barely understand.

In her essay The Pleasure of Text(ure), Jessica Helfand, an American graphic designer who works in multimedia, asked the question: "...so who designs these products?... game designers, software designers, interface designers, production designers, programming designers, and occasionally, even graphic designers. In most multimedia settings, the 'designer' is the person with the vision, not necessarily the person who is 'visual.' The designer can be the author, publisher, producer, or even the programmer... because multimedia production is driven by forces that, though creative in intent, are not primarily visual in nature, the role of designers in the medium still remains to be invented..."⁹ Helfand cautions that "...though its production is by necessity team-driven, multimedia is best served when the underlying vision is a singular one. It is in authorship, not the authoring tools, that such work becomes possible."¹⁰

That several producers or publishers of CD-Rom projects or interactive programs don't acknowledge the need for graphic design as a distinct part of their development is

9. Jessica Helfand, The Pleasure of Text(ure) in *Six Essays on Design and New Media*, William Drenttel, New York 1995, pp.26-27
10. Ibid., p.33

often lamented by graphic designers as proof of yet more design philistinism. A more likely reason for this resistance might be that in new media, the connection between content and its presentation is so tight that there is barely any conceptual space in which to see a separate need for development of the visual independent from the verbal. When that is combined with our general Western rationalistic distrust of the surface and a certain resistance to truly acknowledging the power of visual presentation – or style – (by both the philistines and the design purists), you get what we have now: a lot of stuff being designed without designers!

Another disjunction between the new media and graphic design as we know it is that the process of large group or team projects in multimedia has less to do with the division of labor in print production, and is much more akin to collaborative enterprises, such as theatrical production, TV production, or movie-making in the entertainment industry. And in those enterprises, the identity and independence of individuals responsible for the visual presentation, such as cinematographers, film and video editors, production designers, art directors, property masters and costume and set designers, are secondary in both the hierarchy of the production and in the point of view of the audience to the vision or authorship of the director (and perhaps the screenwriters). While the accomplishments of the visual collaborators may be highly celebrated and compensated, the ability to launch current and future projects rests with the authors – the directors and screenwriters.

A current danger to the independence and fragile claim on authorship currently enjoyed by graphic designers is the inability to understand how to translate their own value or power into the team production of most new media, since authorship in terms of production is not granted to those who only give the project its visual form.

Expanding the field

While specialization in graphic design accelerated during the last decade, many design educators have been pointing out the need for students of design to have strong general educations (like the ones I had observed undergraduates receiving at Yale) to enable them to be culturally and socially literate in the context in which they will be working. At the same time, we have also wanted to produce students who had enough specialized training to enable them, if not to master their crafts, to at least be employable once they graduated. The balance between generalization and specialization was thrown out of whack by the overwhelming problems of digital competence, and the (largely unstated) conviction that to master the new tools was the most critical thing a student could do. This was reinforced by a profession that immediately began to hire graduates based on their knowledge of programs, mostly to lift the burden of technical competency from the busy professionals running their offices. The short-term focus seemed to be entirely on production.

In the U.S., this same generation of younger designers who could not afford to

dismiss new technology as mere aberration were also the designers who were struggling, because of their exposure to and interest in critical theory, to make work that in one way or another tried to deal with issues of meaning and communication brought on by the new technology. For this they were rewarded with an attitude of complete disdain from the older, authoritarian stars, who could only read their work as the result of mindless fooling around with computers, and an affront to the modernist tradition (which in this case was not tradition at all, but really a demand for obedience and deference to the past).

And while a great deal of time was spent specializing, mastering the programs, an aesthetic evolved that was a hybrid between the theoretical and critical analyses of design that the students were being exposed to, and an embrace of certain visual signifiers of the technology that was enabling the production of print itself. A good example of this is the explosion of interest in font design that started in the late 80s, as the exploration of digital capability opened up this once arcane craft to the experimentation of many. At the same time, a certain destabilized, postmodern interpretation of function also allowed for a reconsideration of appropriateness as a design value for letter design, which completely re-energized font design and made it an interesting design problem once again. Oddly enough, this has become the subject that enabled a great deal of generalist discussion and debate on the future uses of design.

But this is all still within the construct of the craft we know, not within the expanded field that looms ahead of us. It appears that we have to completely rethink the problem of design curricula, and the balance between the conceptual work and form-giving. If we look closely at what computers can do now, we see that they have distinct qualities that differentiate them from the characteristics of the printed media. In his article Computers, Networks and Education, Alan Kay (of Apple and MIT) lists their salient qualities as: "interactivity, transmutability (ability to deliver information in a variety of formats), the ability to show information in many perspectives (verbal and visual, still and moving, solid and transparent, etc.); the ability of computers to build models or simulations that allow one to 'test' conflicting theories or ideas; the ability to tailor the digital media to the interest or proclivity of the user, and finally, the ability of the user to create enlarged archives, libraries, data bases."¹¹

Kay goes on to describe these qualities as essential to the process of teaching and informing the public. "To make contexts visible, make them objects of discourse and make them explicitly reshaping and inventable are strong aspirations very much in harmony with the pressing needs and on-rushing changes of our own time. It is the duty of a well-conceived environment for learning to be contentious and disturbing..."¹²

11. Alan Kay, Computers, Networks and Education, *Scientific American Special Issue on Computers*, 1994.

12. Ibid

This is very reminiscent of the old call for the educational initiative in design education to return to conceptual models, grounded in strong generalist backgrounds that foster inquiry, and to create engines to propel work into the future, attached to a utopian dream of a direct engagement with the future.

One could continue to teach graphic design as a viable sub-specialty of design practice (even one that was entirely dedicated to print!) and still get an education that would prepare one to work in an expanded field of media. But to do so, the conceptual aspects of communicating in an environment where the nature of information and the way it is received and understood by its audience **must** be assumed to be in a state of constant flux. This would more accurately identify graphic design as a specialty within a wider definition of design as a conceptual operation. It would also necessitate an understanding of the capabilities (and weaknesses) of specific formats, and an honest assessment of the strengths and weaknesses of various conceptual approaches to various media. But the inherent weakness of graphic design as a discipline for understanding the wider operations of new media is its insistence on isolating the visual translation as the final product of the designer, and a concentration on the final product as the ultimate gauge of the expertise of the designer. (But of course this is not a simple duality; to suggest that there is more to it than the visual is not to deny the critical presence of the visual.)

If you return to the issue of authorship in multimedia, it is clear that priorities in education have to shift away from the focus on perfection of craft. Beyond training the eye to see, technique is an unstable thing. Actually, one of the peculiarities of design education at this moment is the fact that many students possess greater technique on the computer than their teachers, anyway. What teachers can lead students to is a greater understanding of methods of research, of questioning, of learning how to learn that we all need to internalize, more than ever. And there are other things that must be added to the education of designers to enable them to participate as something other than visual packagers as well:

- writing as a means of conceptual and expressive development;
- techniques of verbal expression, rhetoric, narrative and story-telling (the engineering underneath verbal communication);
- the grammar of film, particularly the syntax of editing, cross-cutting and sequencing in time to create narrative;
- sound;
- the grammar and psychology of games, which function as narrative structures as surely as story-telling or film;
- techniques of visual rhetoric, syntax and semantics, using examples from the high art to popular culture, including advertising;
- the awareness and critique of communicative systems as artificial constructs;
- understanding the social, cultural and functional possibilities within the realms of real and simulated space, the public and the private;

- collaboration; knowing what you don't know, looking at models of other team-produced design (advertising, film making, architecture) that involve negotiation and accommodation, complex technical processes, and the negotiation of consensus.¹³ This, needless to say, flies in the face of the designers' fantasy of artistic autonomy. Also needed in the new design education are:
- a history that expands to include a social and cultural development of media;
- and perhaps in contradiction to the last few points, a more serious consideration of fantasy, surrealism, game playing, pranks, simulation, bricolage and other forms of marginal subversion to map out the spaces in between, the entrepreneurial possibilities as a source of stimulation and creativity in approaching new media with a free hand.

Design redefined?

In *Cyberidaho: the Reality of What's Not* Peter Anders speculates that we will soon see "...a new breed of professional, a cyberspace architect who designs... scenarios. The talents of the cyberspace architect will be akin to those of traditional architects, film directors, novelists, generals, coaches, playwrights, video game engineers. The job of the cyberspace designer will be to make the experience seem real."¹⁴ A somewhat more abstract description appears in Richard Coyne and Adrian Snodgrass's article Problem Setting Within Prevalent Metaphors of Design: "...by changing the dominant metaphors it is possible to redefine problems in more readily addressed terms. So in switching from the metaphor of design as information processing we may, for example, characterize design as a process of enablement within a community of expertise... the required solution may not be a technological one... What are the means of collaboration?... The practitioner does not come to a situation with fixed, predefined problem statements, but undertakes investigation and engages in dialogue through which appropriate metaphors emerge."¹⁵

There is not much in either of these descriptions that fits in with the conventional job description for graphic designer. I have no doubt that graphic design will continue to be produced, but whether or not graphic designers as we now know them will continue to propagate is really what's in question. (Is the historical definition of the graphic designer too tied to a specific technology and ideology to expand beyond it?) And as speculative as both the future job descriptions that I've just cited sound, I think they represent conditions or ways of working that already

13. "...in architecture, there are not only creative and technical processes, but a social one as well. You have to negotiate conflicts, you have to identify where the areas of consensus are, and so on. So, educationally, you have to provide people with the skills to operate in the social arena, whether it's big software projects, architecture, certainly film and media." William Mitchell interviewed in The ID Multimedia Forum, *ID* magazine, Volume 41, Number 2, March-April 1994, p.42.

14. Peter Anders, *Cyberidaho, the Reality of what's Not*, *Design Book Review*, Winter 1993, p 20.

15. Richard Coyne and Adrian Snodgrass, Problem Solving Within Prevalent Metaphors of Design, *Design Issues*, Summer 1995, Volume 11, no.2, p.33.

exist, but which still confuse because they co-exist with the older models – which is what I think Drenttel and Green were trying to describe last fall in Seattle. I recently watched a friend apply, and get in, to film school. She had to supply an essay describing her intentions, samples of writing and scripts; samples of photographs, sketchbooks and videotapes. As I watched her going through this process, I found myself wondering: now how is this different from design? I only want to add a point about the aesthetics, actually, because I have gone on now for some time with this generalist's reverie, an idea of radically broadening what might make up the training of a designer, and I don't want to leave you with the mistaken impression that there is nothing interesting left to do in visual design, or that there aren't real things to be made in the world. There are so many interesting problems: What combinations of word, image and form will communicate in the not exclusively linear environment of new media? The improvisation of comedy, the intuitiveness of jazz, the branching narratives of hypertext, the cross-cutting of TV, the density of advertising, the sampling of pop music, the endless windows within windows of software itself?¹⁶ These are all stylistic elements of a new syntax that we've already seen but have only begun to take seriously now that we actually have a technology that can utilize them.

In the last few years, a way that young graphic designers resisted the Juggernaut of professionalization and the expansion of social control through the mass media was to subject the public language of design to a deconstructed, critical reading, which led so many to deny the ability to use that public language at all. But a frustration with that impasse has finally led some of those same critics to understand that the representation (or selling) of style, and the way that people use style are actually two different things. As designers, we are beginning to understand the multiple strategies that open up if we "embrace style as a functional language."¹⁷ The logjam over the preoccupation with specific form may yield a more interesting dialogue on the subject of the variety of visual languages made possible in this moment of expansion.

The train has left the station

While the challenges to graphic design and design education posed by new media carry such great potential for the renewal of design, we cannot pretend that this technological phenomena has been designed, or is waiting, just for us. New media will go ahead without our participation, which for many designers may be ok. The price of participation may actually be the end of graphic design as we know it, and the price of separation will probably be the maintenance of the low profile of

16. This list is paraphrased from Larry McCaffery in *Avant-Pop: Still Life After Yesterday's Crash* from *After Yesterday's Crash: The Avant-Pop Anthology*. Penguin, New York, 1995, pages xxii – xxiii.

17. Andrew Blauvelt, *Under the Surface of Style*, *Eye*, Volume 6, Number 18, Autumn 1995, pp.64-71

graphic design in the public consciousness. The risk carried by the generalization of design education dedicated to new media may be the exaggeration of a split between academia looking to the future, and practitioners still preoccupied with skill and techniques and the very real short-term pressures of running their businesses. Will the practitioners be able to connect the problems that they are obviously experiencing – articulated in so many ways in Seattle – with a new definition of who they are looking for to join them in creating their work? Will the educators be able to develop these generalists who somehow must manage to specialize too? Can it possibly be done in four-plus two years of graphic design training? Can we stand this almost generational split that the ascendancy of the new media is forcing upon both sides of the profession?

Who this new media will serve, who will have access and control – these are even bigger questions that transcend our individual efforts. That is why you find media news coverage on page one, or the front of the business page of the newspaper, not in the cultural reportage. But while these questions go unanswered, a culture is in the process of being created. The American literary critic Larry McCaffery predicts that "Cultural renewal will result when we have not only met the challenge of co-existing with the beast of technologically driven change, but have also learned how to dance with it."¹⁸ The dance has no rules: some of the music seems awfully familiar, but design educators and practitioners must be willing to stumble all over themselves in this murky but most entertaining moment.

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18. Larry McCaffery, *Avant-Pop. Still Life After Yesterday's Crash*, from *After Yesterday's Crash: The Avant-Pop Anthology* Penguin, New York, 1995, p.xvii.

The angel is my floating-point!

By Kenneth FitzGerald

"To get nowhere you must traverse every known universe: you must be everywhere in order to be nowhere. To have disorder you must destroy every form of order. To go mad you must have a terrific accumulation of sanities."

— Henry Miller

A design hysterical

The object of these pages is to relate the story of a laser piece. The CD-drive is sitting on the desk in front of me; it is cool now. I am putting this down to remember the experience, because I shall probably never review another like it. *Throwing Apples at the Sun* is, so far, a unique artifact in design. Elliott Peter Earls's self-initiated CD-ROM project significantly raises the temperature below simmering discussions about design authorship, commodification, and technology. Immediately, Earls deserves recognition for introducing a work that demands such attention and is deserving of such consequence. The scope of the work and the personal investment involved in producing it far outstrips the typical self-promotion pieces seen from designers. While Earls's prospects probably aren't as limited as Henry Miller's at the start of *Tropic of Cancer* ("I have no money, no resources, no hopes. I am the happiest man alive."), *Throwing Apples* is a professional gamble marked by generosity and commitment.

Throwing Apples challenges a broad range of conventions and skirts numerous precipice edges. Two issues of major concern are the relationships between art and design, and the potential of a nascent design criticism. Earls means for this work to have residual meaning within design, while substantially enlarging its vocabulary. The new words he's introducing are familiar terms within art. Critically, this work prompts detailed analysis and interpretation. It would be disingenuous to release such a product then insist if it looks good, it is good¹ when the spotlight shines. I don't respect this critical challenge because the work is hypercerebral, complex, experimental, or non-commercial. It is due to Earls putting his ideas out there and inviting response.

My first significant exposure to Elliott Peter Earls's work was in *The Graphic Edge*

1. Not Elliott Peter Earls. The author takes full and complete responsibility for this quote's appearance, and the consequences

anthology, where Rick Poynor rated him four entries. Two were interesting enough products of now familiar Cranbrook assignments. The other two – posters called ***Nude Language*** and ***My Head Hurts*** – were peculiarly enigmatic (acknowledged by Poynor's placing them under his **Conceptual** and **Raw** headings). Formally, the two seemed more comfortable with the necessary – and problematic – reduction to image for book collections. No surprises here; posters come closest to the art model and dominate design representation.

Conceptually, though, the pieces suffered more than the other selections from being wrenched out of context. The ambiguity wasn't off-putting – just mildly puzzling. Did I have to be Cranbrook-aware to get this? Taken together with the ***Man is my throat sore*** image in ***Emigre #26***, Earls was evidently a designer having physical reactions to intellectualizations – but responding in kind.

In short measure, Earls's typefaces and promotion posters started popping up like smash-hit singles. The works were intriguing because of their mystery and strange-making of familiar forms. One typeface mutated Cyrillic characters into Roman: typing in tongues. Others looked as if they'd been left unused too long in the 'fridge and sprouted roots and shoots in the crisper. They were wittily organic in the digital environment – and slightly menacing. These fonts were growing – what into?

Then, somehow, I wound up on his mailing list, and a poster advertising ***Throwing Apples*** showed up at my former office. Here was the album that the poster singles were preceding. The promotion's sensibility was determinedly oblique. ***Number 7 from Eight Studies for a Portrait of Henry Miller?*** It was all attitude and allusion. No attempt was made to describe what the CD-ROM's experience was.

Prosump(tive)ump

Earls has provided a significant paper trail about his ideas. Though given the opportunity to discuss the work with him, I felt his writings provided adequate context. ***WD-40***, his contribution to ***Emigre #35***, serves as a comprehensive preface to ***Throwing Apples***. The statement is flat-out linear in comparison to his representatively garbled comments in the ***Seventeenth Annual 100 Show*** catalog.

The ***Nude Language*** poster becomes clearer as an initial expression of intent.

Overlapping quotes from Jack Kerouac (***The Origins of Joy in Poetry***) comment on the power inherent in language along with strategies to gain personal control. One quote could be a preface to the CD: ""Burroughs maintains that the only way to counter the playback techniques that are used by others (personally and politically) to control us, is through 'counterrecording' and 'playback,' a procedure of repetition, manipulation and purposeful distortion used as a tool of analysis and aggression ""

For Earls, design is a battleground of cultural self-expression. The designer must confront oppressive social forces to assert an individual, progressive voice.

Commercial interests commodify revolt and usurp creative independence. The designer must adopt strategies to elude co-option and engage an audience. And s/he must show them a good time.

So what can a poor designer boy do, 'cept package for a rock-n-roll band? From the writings of theorists and literary figures such as Alvin Toffler, Hal Foster, Italo Calvino, and others, Earls has modeled the *prosumptive designer*. Existing between producer and consumer, the *prosumptive designer* is a self-initiated, risk-embracing, Renaissance figure. Computer hardware and software, from Quark XPress to Quicken, provide the tools to avoid dominance by the marketplace.

Defamiliarization or *ostranenie* (strange-making) is utilized to highlight and transcend conventional readings of material. The *prosumptive designer* must be passionate, committed, and true to self while reaching out to other designers and non-designers alike.

Of course, Earls also says, "I could be wrong about all this." Postmodernism² has left us authorless (no heroes) and unable to locate or maintain a radical impulse (no anti-heroes, either). The torrent of technology and theory is likely to swamp and short out our higher brain functions. And that may not be so bad. Perhaps an intellectual dyslexia is the only recourse to *pastiche*. Originality is the garbling of your sources. The inevitable becomes a strategy – don't fight the current, get swept along in it. Dry land is a lie.

Pull down the menu, upright the table box position

Earls has amply detailed the underlying motivations of his work. However, no manifesto accompanies *Throwing Apples*. While it is the product and representative vehicle of his ideas, the CD is no dry design exegesis. "...Finally, the greatest of God's laws, always entertain," he declares in *WD-40*. Earls will be uncompromising in his building – but it's a funhouse/ concert hall, not a lecture room. You can check your head, or bring it for some serious play.

Throwing Apples is a long, involuted visual and audio groove. Seduction, not dissection, is the order. Looped throughout is a phantom chorus of voices commenting, announcing, and instructing. Like the man said (I think it was Lester Bangs), rock lyrics ain't poetry. Neither is the textual material contained herein, though much is clever and evocative word-play. A skewed stew of literary, religious, and cultural reference recombine into mock-profound pronouncements.

Visually, the piece is a banquet of Earls's unique graphic sensibility. *Ostranenie* is an overriding design aspect that he handles adroitly. Consistent throughout is a studied anti-mastery that makes natural the morphing fonts, scrawled illustrations, blurred and grainy images. Quicktime movies are home videos-in-overdrive of various

2. If this review were a CD-ROM, the sound of hundreds of designers groaning would be heard as your icon passed over this word

travels: city cab rides, suburban streets, ruins. Dolls and plastic figures stand in for humans, box and dance. Crudely drawn machine parts merge with those of bodies. Kitsch, clippings, and ephemera become central characters. Active and static images layer on top of one another, dissolving and revealing.

As with his fonts and posters, *Throwing Apples* abnormals the conventional – if a medium as new-fashioned as CD-ROM can be said to have customs. The program takes the form of a bizarre, mutant application within the desktop. Windows pop up within the display environment, a stylized palette appears dead center of the screen, and the top menu bar offers four specialized selections – *Grooves*, *The Book of Kings*, *Nudes*, and *Ostranenie*.

The *MasterCylinder* is engaged upon start-up: a scrolling selection of five posters, now made interactive. The posters are diagrams and blueprints of a culture collapsed in upon itself. Simultaneously high, low, and no-tech, they fuse obscure artifacts and recognizable icons into awkward but genuine schematics with personality. Binding the works together are Earls's classics-gone-to-seed fonts. Selecting aspects of the poster with a diagrammatic suit icon triggers Quicktime movies, sound effects, spoken-word pieces, and text windows. At times, activation points seem to follow an infinite progression through activated layers.

The Book of Kings moves through seven spreads of an old, discarded book, *Great Inventors and Their Inventions*. Most pages have been significantly intruded upon with sketches, scribblings, and photos. Others rest untouched, or bear the notes of the original owner. *The Book of Kings* provides less evident layers and active areas than *MasterCylinder*. Selecting images animate flashing texts and repetitive voices that expand upon the imagery.

Overall, the work is cleverly arranged. The operator (a new term is needed for those who play interactive CD-ROMs) can move through the work either through the different menu selections or the palette. *Grooves* correspond to *MasterCylinder* images and certain *Book of Kings* pages. The standard CD-ROM idea of a search/scroll is replaced with a reshuffling. While you are given options, navigation isn't the precise concept. The program's construction reinforces the theme of intellectual dyslexia. Fragments fail to coalesce to definite meanings, nor do they attempt to.

Success in this medium may be measured by the inadequacy of a linear narrative to describe the work. When performed correctly, the project should demonstrate an alternative experience. *Throwing Apples* successfully exploits the potential of CD-ROMs and is natural to the medium. A minor caveat is that the posters perform a bit awkwardly in the compressed environment. It is, of course, impossible to see them whole except as overviews – which presents them at the scale of a book reproduction. However, their presentation as explorable environments re-imagines the function of a flat, designed surface. It also questions scale and proper viewing distance.

DAT's entertainment!

The idea of a crude, mutant program is engaging and humorous. The customized control palette is a wonderful touch that I wish had been taken further. Earls plays off the default windows and type that comes with the Mac, setting his program against the operating system. (Selecting certain texts on the posters will call up a message window with the same text, only in default type.) I would, however, enjoy seeing his fonts take complete control of all texts, and having him skew the rigid geometry of the window frames themselves. ("We control the horizontal, we control the vertical.")

Critiquing the music is a real taste-defining area. Conceptually, the grooves are an additional layer of activity, not quite soundtrack, not quite in sync. Stylistically, the tracks are a rap/rock fusion of beat-box rhythms, sampling keyboards, and metallic guitar intrusions. The presumptive designer made me think of the legend *design will eat itself* that headlined *Emigre's Designers Republic* issue. This music has a reverb of *Pop Will Eat Itself*, also. The jukebox jury verdict is that Earls can play and stick some hooks. This is, I know, faint praise from a guy who can't even play air guitar convincingly.

The grooves stay organic in their rough hewn, garage band demo sensibility. At other times, it seemed as if I was hearing a cover version of The Beatles' *Revolution #9*. Earls refers often to outdated, predigital technology – particularly in *The Book of Kings* imagery. The opening seconds of surface noise, bluesy harmonica, and languid guitar complements this characteristic. There is an expectation of wax cylinder recordings, popping Victrolas, tape hiss. More contrast between manual effects and synthetic sounds would be interesting. While I have no technical problem with his electric playing, I'd urge Earls to unplug more often.

The raw character of the visuals is echoed in the audio tracks. The incessantly rapid videos and synthetic beats are occasionally off-putting. Earls is always shouting, putting on some accent, or electronically modulating his voice. It's soothing when he and Darlene Kries Earls try some off-key harmonizing on the choruses of *Love Can Dig A Ditch*, *Love Can Build A Bridge* – after a staccato, top-of-the-lungs, ranting verse. The sound effects are crackles, feedback whines, crunching guitar chords, driving pulses. Except, perhaps, for *Oranges of Hieronymous Bosch*, meditative isn't in the *Throwing Apples* vocabulary. This is in keeping with a work about dissonance – cognitive and otherwise. Though the soundtrack may not be to all tastes – the same can be said for the graphics – it's consistently disturbing and frequently catchy.

Pseudominous

Earls also supplies a punning, dead-pan wit throughout. Clicking on a doll head image calls up a text window: *This does nothing*. The Help screen is terse: *It's pretty simple. Single click on objects in windows. Yeah, I wish*. Selecting certain poster

texts calls up windows that repeat the same words – or tosses in a question mark. You're on your own.

Overall, the text is a stream of punning, profane, and pseudo-profound gibberish.

As such, the tangle of dyslexic phrases is hit-and-miss. The occasional gem – *She is indeed, both the tigress and Euphrates* – makes up for others falling flat. Is the phrase Earls or Henry Miller? (Is it real or Memorex?) The point seems to be that it doesn't matter. The text is riffing. Earls constantly skirts the edge of monotony and annoyance as another cryptic phrase or snatch of blurry, high-speed video is activated. If you're hunting down meaning, it will frustrate. To those accepting a cerebral seduction, it's eye and mind candy.

Synthetically produced misreadings, however, are highly unstable. They often come off as forced and self-conscious. Employing all these high culture references suggests a commentary on the material. Is the implication that these particular ideas will seize up the cerebrum? That's what many traditionalist critics suggest. Everything circles back to itself or points to ersatz Henry Miller? Is it all just input, any literature will do?

All is grist for the mill. Many of the references in *Throwing Apples* are familiar pop culture/postmodern fixations. Astro Boy can't help but make me warm and nostalgic. It's likely that this is all an extended gag (joke and choke) on Cranbrook/avant-garde design fixations. As parody, its half masticated and partially digested code codings hit the mark.

Ostranenie angels

Earls cites a number of influences directly in his writing. Resonances of other artists are heard in *Throwing Apples*. Containing images and ideas going back some four years, the project suggests a monumental accretion or grand scheme. As such, the CD resembles a small-screen *United States I-IV*. For her epic performance work, Laurie Anderson gathered together a "...special blend of music, slides, films, lights, tapes...hand-gestures...and more..."³ to make a fragmented, multimedia narrative of our country. By turns wry, irritating, mesmerizing, hilarious, and tedious, Anderson fashioned a singularly amazing and moving performance piece.

Throwing Apples is similarly a catalog of effects. Some pieces recall Anderson strongly. *Oranges of Hieronymous Bosch* is reminiscent with its processed voice relating a profound/banal dream over a minimal instrumental track. Unlike Anderson, Earls's unprocessed or unaccented voice is rarely heard. While accomplishing the distancing, strange-making intent cheaply, this aspect is worth more treatment time. Many of the process sounds are standard distortions. The voice in *Oranges* is identical to Stephen Hawking's voder and it's difficult for me to break that association. Is this intentional?

³. Laurie Anderson, *Yankee See*, ©1984 Difficult Music, *United States Live*, Warner Bros. Records.

United States relied upon its breadth of effects and non-stop blitz of stimuli for its impact. The media was message. Broken into its component parts, the work was a triumph of do-it-yourself, low-tech. The virtuosity was in Anderson's orchestration of the elements. Her wit, invention, and intelligence held it all together. *Throwing Apples* shares this. There are certain talents at which Earls excels, others where he holds his own. At its best, the resultant work questions the ideas of expertise and specialization.

Book of Kings is an interactive variation on Tom Phillips's long-running artist's book **A Humument**. This treated Victorian Novel is a déconstruction of a discarded 1892 novel purchased as both canvas and content-provider. The artist draws new narratives from the original text by highlighting words between and across lines and painting over the remaining copy. Inspiration for the artwork grew out of an interview with William Burroughs and his cut-up technique.⁴

Earls's book shares this reference point with **A Humument** but is its own distinct work. **Great Inventors** was evidently selected as source book for more rhetorical purposes. It is backdrop and sub-text. Earls layers over the existing text rather than restructuring it. The book is a metaphor for his own invention (as the original text describes technological first steps, so Earls's counters with an image of a child performing the same action), and a literal homage to those whose shoulders he stands upon. **Book of Kings** is the most direct narrative, a story of technological invention and inspiration.

William Burroughs provides a foot-hold for all these artists. Each is engaged in dislocating meaning with a sensibility summarized by Burroughs's quote: "language is a virus from outer space." Earls's intellectual dyslexia resembles Burroughs's cut-up technique, which is cited in **Nude Language**. Earls's spin is slicing and dicing the cut-ups: most importantly, Henry Miller. For his inspiration, Earls has swerved into literary territory and a generation of cultural renegades. Henry Miller is guiding angel for, in Earls's words, "...a well organized attempt to integrate life and art."

Paris or Prince tops?

Miller is, on the surface, far from the template for a graphic designer. Get blind drunk, start a fight, screw in an alley-way, spew up in the street, stagger home and...knock off an annual report? From conversations I've overheard at AIGA gatherings, this is what many (male) designers would have us believe is their usual working method. The toll it would take on their clothes alone suggests otherwise.⁵ Miller is symbolic as a romantic vision of the artist, lustily pursuing and copulating with the muse. A legion of frequently inarticulate, pure painters hard-core pore over his writing. For many, being an artist is living a certain lifestyle, not just

4. Tom Phillips, **Works and Texts**, New York: Thames and Hudson, p.255
5. With Vaughn Oliver, though, all bets are off

making pieces. Unfettered by conventions, they are true artists, responsible only to the truth. But is uncompromising ego(t)ism a useful model? Is my life inartistic because I eschew alcoholic excess, am faithful to my wife, and am willing to work in collaborations?

Considering its patron saint, *Throwing Apples* is rather discreet. There are two nude women on the CD case – one torso is prudently tucked under the flap. The male nudes are fig-leafed and masked – by activatable areas. (Two are also very time-conscious, and wear watches.) Henry Miller's view of women isn't the most enlightened. Neither are traditional fine art portrayals of the female form, which Earls references in the depersonalized, headless nude torso. While this isn't a CD-ROM Henry Miller reader, why isn't the scatology factor pushed? Would it be too raw and real?

If I was to ask Earls anything, it might be if any of this work was done when he was really fucked up. There's the appearance of rough-and-ready, unstylized slapdash in *Throwing Apples*. However, there's a greater distance between computer keyboard-to-CD-ROM than typewriter keyboard-to-book. Impulsiveness doesn't follow easily with computer technology.

Prince is also cited in *WD-40* as a multi-versed artist, representing music. Like many rock stars, he's venturing into interactivity. In a presumptive move, he adopted that symbol-as-name, according to some reports, to break the dominion of his corporate record label. Pop music offers many noted multi-instrumentalists, from Paul McCartney to Dave "Foo Fighters" Grohl. Prince, however, matches Henry Miller in artistic sexual obsession. Amongst the determined one-man bands, Todd Rundgren strikes me as more suggestive of Earls. Rundgren was an early video pioneer, released an interactive music CD (song fragments you could shuffle into new compositions) as his last title, and has always been a master pop contrarian. If you buy this comparison, *Throwing Apples* is Earls's *A Wizard, A True Star*.⁶

He piston convention

Commodification preys on the mind of contemporary design practice. This dance-with-the-devil discussion is everpresent and perplexing in all creative activities. The issues involved are complicated and far from straightforward. Art, which plays to a narrower, privileged clientele, is far from pure. Design's current self-consciousness likely reflects the unabashed commercial boosterism that has dominated the practice. Observing designers' responses to the marketplace reveals

6. Todd Rundgren, *A Wizard, A True Star*, Bearsville Records, 1973. *Wizard* mixed Rundgren's multi-instrumentalism with band support over one 56-minute (!) LP of nineteen tracks. Todd mixed stirring anthems (Just One Victory), moving cover tunes (I'm So Proud/Oh Baby Baby/La La Means I Love You/Cool Jerk), synthesizer-driven instrumentals (Flamingo), punk fury (Is It My Name?), and goofy studio pranks (Dogfight Giggle), and more into a glorious compost. To top it all off, the LP had great cover art (a die-cut-corner gatefold sleeve) and avant-garde literary credibility (a verse called Star Fever by then-unknown poet/record reviewer Patti Smith printed on a band-aid insert). Moral of this story: it's a compliment

rationalization, invention and evasion.

Throwing Apples represents an effort to completely control the creation, manufacture, and distribution of a mass-produced work. Earls is only indirectly beholden to corporate interests – the manufacturers of the equipment.⁷ **Prosumption** is meaningful if it leads to investigating and occupying the codes of commerce. **Throwing Apples** is provocative by making a narrative of itself as a commodity. Usually, the product stood apart from the artwork, to not sully the aesthetic event. This distancing has become increasingly hypocritical and troublesome to maintain. The marketplace doesn't just lurk behind the art, it is encompassing. Artists and designers must deal with this reality to have relevance. Another interesting example of commercial narratives is the changing nature of type promotions, which have become increasingly **creative**. Type is no longer the building blocks of language, selected for purely formal reasons. Fonts are and have stories. The situation is more complicated than choosing a face because it signifies **cool** or **classic**. Emigre pushes this, with the biographies that accompany many of their fonts. **Throwing Apples** is the most baroque construction yet invented to sell type.⁸ Then again, the type could be selling the CD-ROM.

Throwing Apples may also be regarded as a prototype art kit. You buy the art: the CD – and get the makings of your own: the typeface. Artwork has always served as a generator of more art, though not as explicitly. The idea of commodity is twisted back on itself. The presumptive designer, though, doesn't purchase fonts.

In the rad zone (react-or going critical)

Earls makes a number of radical and revolutionary claims for the presumptive designer. His product is a persuasive argument for his ideas. There are, however, constraints to his ideal. Technology and talent will only do so much. **Throwing Apples** couldn't exist without sophisticated hardware and software. The issue of access to all these technological products needs to be raised when the potential gets glorified. While everything Earls uses is off the shelf, those shelves aren't within everyone's reach. A select few have the technology necessary to make and experience his project. This situation is, sadly, old news, and has arisen with every new art/communication medium.

We're closer to pluralist access, but there's still a long way to go. What happens to the poor presumptive designer in the interim? It's futile and ridiculous to suspend production while everyone catches up. By that time, new technology will be introduced and we're back to square one. A world where everyone can manufacture their own CD-ROMs is a fascinating one to consider, but is not imminent. Proclaiming

7. Though I was bemused when the distributor of **Throwing Apples** began referring to itself as "Emigre, Inc."

8. Coming in second would be Thirstype's **Kulture Kit**, with its up-front agit-prop, abstract impressionistic catalog, and fantastical, illustrated postcards. An animated version of those images would be something to see.

the presumptive designer may be economically premature and creatively frustrating. Is *Throwing Apples at the Sun* radical? Radicals are extremists. This CD will be anathema to traditional designers – it's even put off adventurous artists I've exposed to it. But traditionalists are an easy target. Earls has grabbed the author flag and sprinted far downfield. One team will cheer his progress, while another claims he's stepped out of bounds. Such a narrow field makes transgression less profound. We may also question striving to radicality for its own sake. The attempt invites confusing signifier with signified.

Throwing Apples continually undercuts itself with its dyslexic language and self-references. The undermining ceases when it comes to Earls being a designer and his products.⁹ This is pragmatic. Unless he's funded, it's likely Earls needs people to buy his products. But making the leap into fiction may be the decisive radical act. I want to call in an order for a font and instead get one of those processed voices telling me: This does nothing. Or instead of Earls's current bio – which consists of his birth date and where he did his undergraduate and graduate studies – there's a story of how he lost his virginity.

Catching hell from the fathers

The conception of the presumptive designer continues the traditional emphasis upon the designer as meaning provider and arbitrator. When all is selected and shut-down, how the work is interpreted is a mystery. What of the presumptive audience? Who are they? From the evidence of *Throwing Apples*, they're designers. Earls's theorizing is a justification for designers to clear a wider space for their activity – to be authors and artists. However, outside of design, no justification is needed. Given the opportunity, all types of people will get hold of the tools of production and create. Theory isn't required.

As Andrew Blauvelt noted in *Emigre* #38, asserting an auteur status for designers contradicts Barthes's assertion. For all the talk of postmodern author death, no one suggests killing themselves professionally. Might a new anonymity actually be in order? (As opposed to the fictive, non-mediating, modernist figure.) Could this be the true insurgency? Instead of inflating your stature separate from the audience, you accept an indefiniteness. Join the culture! I may just be swapping here for my own personal literary and designer heroes: Thomas Pynchon and Barney Bubbles. In their own ways, they de-emphasized their status and removed themselves from consideration.¹⁰ The audience has only the work and themselves.

Rather than reinforcing the all-in-one impulse, it may be subversive to encourage the collaborative. Change requires numbers. Group dynamics also bring their own æsthetic and pragmatic rewards. I admire Prince, but also R.E.M., who, like more

9. For example, the credits on the CD case utilize his fonts but are classically set in centered and justified alignments

10. And, sadly, Bubbles removed himself completely

and more bands, equally share songwriting credits. While Michael Stipe writes the lyrics and gets the attention, they all share in the real profits – and keep playing.

Apocalypservice (riverrunon sentence)

Cultivating creativity is a serious business and a devotional pursuit. Until we have the presumptive audience, it doesn't really matter that *Throwing Apples at the Sun* was accomplished by one person. If it inspires someone to just design fonts, or make videos, or compose music, it's successful. Prosumption is back-story. Earls acknowledges this and has put the CD out on its own terms. Curious viewers should turn it on and enjoy a exceptionally lively experience.¹¹

On the title window, a version number (1.0) is given for the program, indicating an intention to upgrade the work. This is another novel twist upon the traditional artistic process. Will Earls be growing or refining the piece? His recent *Venus Dioxide* font promotion poster could easily be incorporated. It is said of many artists that they actually labored on one career-encompassing work of numerous parts. Earls might be taking this literally. Someone also said, "A work of art is never finished, it is abandoned." of course, an artist should have abandon...

Kenneth Fitzgerald is an artist, designer, and writer living in the Boston area. He is purportedly at work on a personal (possibly fictional) magazine project entitled *The News of the Whirled*

¹¹. And I should mention the beautiful package that holds the entire piece

It bytes

By David Thomas

Frank Black is suspicious of multimedia and See Dee Plus (enhanced CD or CD extra. Used to be called CD+). The following is the gist of a monologue on the subject delivered over a MacRib Combo Meal. Which means it was a business expense, Charles, and I bet you can deduct it.

People who make pictures are **square daddies**. Regardless of whether they paint, pixelate, draw or shoot, square daddies really don't care as much about what the object means as they do about whether or not the thing looks cool. Oh, they may protest and look soulfully into your eyes to say it just ain't so, but when the going gets tough and the hard choices are looking at you quizzically, then it's a rare daddy who will walk the narrow road. The easy road is a sort of visual amorality. They don't like talk of good and bad – it limits their choices. It's narrow-minded. It's the old way of thinking. In the brave new world, you get the thing to look cool and then say it means whatever you think you can get away with. Preferably with a sneery undercurrent that the rubes will miss. The square daddies rate with used car salesmen and politicians on the credibility-o-meter, and they know it. Oh yes. They lurk in the outer darkness, plotting *sotto voce*. They chaff. Their nasty resentful little minds scheme. And when they get a chance, a crack they can slither through, they get even. Look what they did with rock music. They shoe-horned it into cheesy bite-sized flat TV dimensions faster than you could say MTV. And the irritating part is that square daddies always make sure you know that they are with it. Sad.

Musical theme interlude: "They smile in your face / all the time they're gonna take your place... the backstabbers!"

Maybe I exaggerate. Maybe I cast my net too widely. Nevertheless, it costs a lot of money to make multimedia look good. And look good it must. So say the square daddies. Yeah, but who put them in charge? Nobody asked me. Did they ask you? I say, boot the bozos before it's too late!

Oh, sure, the programmers, the **code daddies**, cost money too. So boot them! Why discriminate? You actually can do it yourself. Director isn't that hard. Apple Media Tool might be better. It's also cross-platform, and I bet reading the manual isn't really required to get on with it. Hey, use HTML for that matter!

Oh, brother, draw the line in the sand here and now! Seize the code and oust the boot-licking servants of the two dimensions! Multimedia will never go anywhere until

the amateurs take over, until the primitives rule and the designers are driven back into their holes. Anti-aliased text? Ha! I spit on your anti-aliased text! Albums don't exceed 45 minutes. We know that the consumer is notoriously intolerant of listening times much past that length. There's no point bucking the state of affairs. This leaves a few hundred meg going to waste on each and every music CD. The See Dee Plus makes use of this. The one disk will play your album on every compact disk player out there and it will also deliver computer data, the multimedia stuff, to Mac and Windows machines. And what this means is that you are free because the space is free. The consumer has bought the music part. That means you, the artist, can screw up the rest without fear of cheating anyone. Do it! The last hurdle is the record company. Oh, sure, they're keen, don't get me wrong, but it's the compact disk scam all over. They're gonna insist on cutting your royalties at the same time as they raise the price to the consumer. They'll be very sincere about it. They'll look you in the eye dolefully and talk of the massive costs of new technology. I'll tell you what those massive costs are: the cost of two hybrid ROM test cuts (\$100), a See Dee Plus master session (\$300), and a See Dee Plus test cut (\$200). What hikes the cost up is the work of the square daddies and the code daddies.

Do it yourself.

Screw it up yourself.

Maybe you won't.

Be free.

Or hire me.

David Thomas is the vocalist/etc. for Pere Ubu. You can view enhanced versions of the Jbu floppy disk releases, digital movies, graphic files, sound files, and miscellaneous "garbage" on Pere Ubu's CD-Plus releases of *Folly of Youth* and *Beach Boys*, both on Tim/Kerr Records. For more information check out the Pere Ubu tech support page <http://www.dnai.com/~obo/ubu/tech.html>

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Call for papers:

ars electronica/ars fabula

Anne Burdick, Steve Tomasula and *ebr*, the electronic book review, are currently soliciting essays, visual projects and reviews for *ebr*'s upcoming issue on the interaction of narrative and image in print and electronic media (*ebr5*). We're open to essays in combination with online visual projects that deal with any aspect of narrative (narrative theory, cultural criticism, politics, etc.). We are especially interested in works that perform the ideas they articulate and would most like to see submissions that could do so online. For more information, check out *ebr* on the Web; <http://www.altx.com/ebr>.

ebr is an electronic book review, an online forum allowing critical writers to present their work on the Internet. We are committed to reviewing (literally, seeing again) every aspect of book culture – fiction, poetry, criticism, and the arts – in the context of emerging media. At the same time, *ebr* is a review of electronic books, promoting translations and transformations from print to screen, and covering literary work that can only be read in electronic formats.

Please address all correspondence regarding *ebr5* to both guest-editors, Steve Tomasula Tomasula.3@nd.edu and Anne Burdick abincite@aol.com.

Deadline for finished work: November 1, 1996.

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The readers respond

Vent, respond, comment or criticize;

Snail mail: Emigre, 4475 D Street, Sacramento, CA 95819, USA

Fax: (916) 451 4351

Email: editor@emigre.com

Dear Emigre,

I've read quite a bit lately in *Emigre* and the design press about the designer's role and designers' perceptions of themselves. This seems to take on several different aspects; the designer's role in society,¹ collaboration with writers and artists² and the need of the designer to attach validity and importance to their role, as well as put their own individual stamp on their work.³ I am somewhat mystified by all these debates because I view design in a different manner than some designers do. I worked for over a decade as a record producer and then fell into being a designer by accident. (I still think of myself more as a musician than as a graphic designer, despite the fact that all of my income is derived from design.) To suggest a different approach to design, I propose that you pretend that you are in a band. To me, that's exactly how the process of design feels. The parallels and similarities between graphic design and making a record are very, very close.

First, you'd never want to play in a shitty band, would you? Probably not. "Yeah, dude, I'm in this band, we do this kind of retro-rock thing. It's allright, but the guy who writes the songs is pretty lame, but I just play lead guitar so it's cool... I guess." To me this would be the design equivalent of designing things that you really didn't care about at all. Why bother? Well, I guess you need to make money and that's valid. But, like a drummer who works in one band to get by and is always looking for the ultimate band that he or she is really stoked to be in, why not keep looking for design opportunities that excite you? Of course, this will require a lot of initiative, but that's OK, too, because as a design professional you've gotten this far and I think it would be safe to say you still really love to design, right? That's why you're doing this and that's why you bought this expensive magazine, right? So, if you don't like your current gig, grin and bear it, but don't stop looking for a better one – a gig where you're working with people that you really respect

1. *The Social Space of the Page*, Stuart McKee, *Emigre* #36.

2. *Emigre* #37, *Joint Venture*.

3. *Desperately Seeking David*, Andrew Blauvelt. *Emigre* #38 and the Mouthpiece issues of *Emigre* #35 and #36.

and on material that you really care about.

OK, you're already in a great band? If this is the case, then you've really got everything pretty much licked. The one thing that never ceases to amaze me about great bands and the process of making a record with them is that the end result is far greater than the sum of its parts. When you've made a great record, you listen to it and everybody's going "Yeah, this is fucking great!! This rocks! Dude, your guitar part in the bridge is so cool!!" and on and on as everybody is patting each other on the back for what a great job they did. The amazement and respect for each other ensures that everybody's egos are left at the door. Of course egos always flare, but in a really good collaboration there is a creative tension and balance that always works out in the end. (At least for a few years, unless you're in the Rolling Stones and then you're the exception to prove the rule.)

Over the years I've made a lot of records with a lot of different bands, and while most of them are average, there's a handful that I think are really good.⁴ And looking back on them, it's that sense of respect, collaboration and making something that is greater than the sum of its parts that was so exciting that it kept me locked in the recording studio for the better part of a decade. Now, I get that exact same feeling as a graphic designer.

Before I move on, I'd like to cite a few examples that you might be familiar with.

Anybody who is a big Beatles fan will have to admit that no matter how much of a Paul McCartney or John Lennon fan they are, there was something magic about any Beatles album that just wasn't quite there on their later solo albums. OK, go through your record collection now and count how many of Keith and Mick's solo LPs you have next to your Stones albums, and how about Robert Plant and Jimmy Page versus Zeppelin, Sting versus the Police? As a more recent but slightly different example, what about the Foo Fighters and Nirvana? While the Foo Fighters CD is a pretty good record, does it really hold up against Nirvana and Kurt Cobain's songwriting? You decide, but that's not my point anyway.

Here it is: The Foo Fighters record demonstrated that Dave Grohl is an extremely talented and versatile musician and songwriter in his own right. But, did you see one or two Dave Grohl songs popping up on Nirvana records? Did you hear rumors about creative differences in the band, because Dave Grohl wanted to write his own material and play guitar and sing on a few songs? No you didn't, because Dave Grohl knew that he was in one of the best bands ever and he probably had a hella' respect for Kurt Cobain and he was happy to just play drums. He left his ego at the door. See, it's easy. Just pretend you're in a band.

It's easy for me to think this way because I am working exclusively on a magazine⁵ that I helped to create and that deals with subjects that I am very passionate

4. Vomit Launch, *Dogearred* (Teen Beat); Helen Keller Plaid, *Din*; Drop Acid, *Making God Smile* (Restless); 5'10", *Rodney, Reggie & Emily* (Cargo); 7 Seconds, *The Music, the Message* (Immortal/Epic), and John Tchicai & The Archetypes, *Love Is Touching* (B & W).

5. *Heckler*, a magazine about skateboarding, snowboarding & music

about. I have two partners that I have a huge amount of respect for. Sonny Mayugba writes beautifully and Chris Carnel is one of the best photographers in the world. (Coincidentally, from time to time we also play in stupid, fun and weird bands together) I would never even consider doing something designwise that would diminish Sonny's text or Chris's photos just to show off my design *chops*. That would be like a 10 minute guitar solo in the middle of an otherwise brilliant three minute pop song; that would be seriously dorking it. Why would I make something hard to read or see just because I can? Consequently, Sonny and Chris pretty much let me do whatever the hell I want, and if I occasionally do something weird or illegible, they're usually cool with it. They pretty much trust me just as I trust them to come up with good words and pictures for me to work with. It's a mutual thing. Chris is usually pleasantly surprised with the design of the magazine, but when he or Sonny critique me, it's normally something I agree with and it makes the end result stronger.

If you think like this, the whole issue of designers needing to be *auteurs* and artists in their own right (*Desperately Seeking David, Emigre #38*) goes away. Your one goal in life is to play the song the best that it can be played. Or in the case of design, to present the ideas, be they words or pictures, in the best way possible. Don't get me wrong here; I'm not arguing in favor of modernism, post-modernism, deconstructionism, grunge, classical or any other design doctrine. All I'm saying is to respect the people you collaborate with. If you do, your instinct will take over and you'll always do the right thing. All design is collaboration, unless you are actually creating all of your content and ideas yourself. And, besides a few people like, perhaps, Elliot Earls,⁶ most designers are collaborating with lots of people, even if they may never actually meet or talk to each other. Respect the people you collaborate with as if you were in a band with them. If you actually care about the content of whatever it is that you're designing, then your design will reflect that and you'll do your best work. Issues of what type of *ism* to believe in also go away with this in mind. It might even free you up to think about other aspects of the design process and do some of your best work.

John Baccigaluppi, HecklerMag@aol.com

Dear Emigre,

Issue #38 deserves real praise. Copping an Attitude is especially fantastic. However, one point in the otherwise amazing Part 2 by John Downter deserves further discussion. In Type Rephrasing and Type Rephrasing Rhetoric he rightly complains about the misleading publicity for ITC Garamond. This typeface should be classified as a

6. Elliot Earls's *Throwing Apples at the Sun* project is a one man tour de force that goes beyond design into the realm of art

not-Garamond, but he goes overboard when he calls the design itself a travesty in the middle of page 19.

Downer seems well aware that ITC Garamond is part of an identifiable typographic aesthetic that existed before ITC even came along. Some antecedents are Americana, designed for American Type Founders, and the letter form instruction of Mortimer Leach and David Gates (their handbooks are *Lettering for Advertising* and *Lettering for Reproduction*, respectively). Anyone who finds ITC Garamond scary will be shocked by the regularized character proportions they advocated and particularly offended by Gate's large x-height Caslon.

Emigre is valuable for displaying and championing the individual aesthetic of the designer against prevailing tastes. Tony Stan's design is not an unintentional mangling of Claude Garamond's work. It is too far separated from the original and (as Downer probably knows) derives from ATF's Garamond Oldstyle, which itself derives from type cut by Jean Jannon anyway. The design is coherent and of its time and place: the center of American advertising in the mid-1970s, before this reader knew what a serif was. It remains a typeface we can respect even if we decline to use it.

Sincerely,

Peter Bain, Brooklyn, NY

Dear Emigre,

Design Week, published in this country, has recently printed an article about your font *Mrs Eaves* and my wife Annie who is, *inter alia*, a typographer. Strangely, one of her favorite range of fonts is Baskerville, and in recent history she acquired, at no small expense, an original book by the man himself.

I have been looking through your brochure about *Mrs Eaves* and would like to raise a non-typographer's question. Why are the open quotes in the font upside down?

Is this some arcane typographic device? The *Mrs Eaves* here does not seem to know!

I have been thumbing through some old type books this morning and have not got any further forward in deciding whether you are right in putting in droopy opening quotes. For example: beside me, in an old type book, I have the font Cooper Black. In this, the open quotes are the *right way up*, but in Cooper Black Italic the quotes are shown *upside down*. In the condensed version they are the *right way up* again.

All Baskerville is the *right way up* but I have found other examples where droopy quotes are shown. Looking now at Helvetica Medium Extended I see you are given both options!

Can anyone give me the definitive rule about the use of the type of open quotes, or is it just designer whim? I must say that the droopy open quotes on *Mrs Eaves* look very odd to me. Have you seen droopy quotes used in any newspaper?

As you might imagine, we will probably be getting a copy of the *Mrs Eaves* fonts. Just

to please me, you wouldn't like to add an open quotes the right way up would you?
Maybe Baskerville would turn in his grave, but I can't help that!
Aesthetically concerned, I remain,
Yours sincerely,
Peter Eaves (Mr)

P.S.: For heaven's sake: I have just opened *Anatomy of a Typeface* by Alexander Lawson. The book fell open at a page which reprints a quote from *The Tempest* originally printed at the Officina Bodoni in 1924. Here, open quotes are used both sides of a quotation. Architecture is for architects, typography is for typographers, Etc.

Response,

Thank you for your letter about quotation marks. This is a topic that comes up again and again because my personal preference is for quotation marks that are **upside down** from what is the norm.

I think it's interesting that you refer to my open quotes in Mrs Eaves as **droopy** because that's exactly my perception of the traditional quotes. (I think quotes look **droopy** when the heavy part is on the bottom, that's why I put the heavy part on top. To me traditional quotes simply look **upside down**.) Just goes to show how subjective perception is.

You ask if there is a definitive rule about quotation marks. Well, there is an aspect of typography that is more akin to art than science, and consequently has no definitive rules. Typographic standards are for the most part conventions that have come about through consistent usage, but these conventions change over time through small changes in usage, much like language. You know what they say about rules... they're meant to be broken!

However, if I haven't convinced you and you'd still prefer the more traditional quotes for Mrs Eaves, you'll be interested to know that Emigre Fonts will be releasing a special extended ligature font set for Mrs Eaves, and we plan, as the result of your suggestion, to provide alternate quotes in these fonts.

Best wishes,
Zuzana Licko

Dear Emigre,

Upon notice that my subscription has expired with **Emigre #38**, I find myself having to decide if your magazine is really worth the time and effort. As a whole, I found #38 to be very interesting. The work of Susan LaPorte and Margo Johnson was quite enjoyable, while Andrew Blauvelt's, Steve Tomasula's and House Industries's articles offered enlightened reading. Money is not the question as these articles more than justify the \$7.95 per issue. Rather, it is the kind of criticism voiced in

Rudy VanderLans's and John Downer's Copping an Attitude article that forces me to consider if I want to have any part of your magazine.

As you may recall, *Emigre* #36 included a letter I submitted in the hopes of offering some insight into the level of criticism in your magazine. In part, I outlined my distress with Keedy's name calling and critical attitude without actually ever naming names. As a result, his article left me confused. Exactly who was he speaking about (in regard to other designers), and where did he come off thinking that this was an acceptable manner of criticism? By bringing this to your attention, I had hoped that this sort of gutlessness would cease; obviously my letter fell on deaf ears. After reading Copping an Attitude, I have come to understand it has become an acceptable route for criticism in *Emigre*.

Following are some brief examples that I hope will help illustrate my point and also highlight the snot-nosed elitism *Emigre* encourages.

Copping an Attitude, Part 1

- A. Who are these "experimental" type foundries that are failing to show any evidence of their experimentation? Is Mr. VanderLans afraid to tell us who they are or do they even exist? Obviously, experiment has become a buzz word for many type designers and therefore, it should be taken with a grain of salt. The process of experimentation will also vary greatly between designers and, therefore, the results of their experiments will vary. In short, some will be more successful than others. If Mr. VanderLans had illustrated his article with specific examples, not only would I have a better understanding of his idea of experimentation, but letters such as this would not be necessary.
- B. "Presenting us with only a result and not its process creates two problems. First, it is difficult to consider the motivation behind these new creations to be anything other than personal and financial gain..." The connection Mr. VanderLans makes between the lack of visible process and financial gain is absurd. He is leaping to conclusions. The graphic design field is a very large, diverse profession and to think that everyone should practice in the same way is a romantic illusion that will only lead to disappointment. Please provide us with an outline of process as acceptable to VanderLans.
- C. Calling these new foundries "upstart" is an unfortunate attempt to dismiss their work. If I remember the past correctly, weren't well established designers trying to dismiss your work with words such as upstart? Considering that type designers are at the mercy of type foundry's particular tastes, I'm surprised we haven't seen more small startup foundries.

Copping an Attitude, Part 2

- A. Ultimately, the flaw with this article is that while Mr. Downer writes about poorly executed revival typefaces and all the horrors that follow, he only cites examples of what he feels are well done revivals. How can the reader have any point of reference without the inclusion of examples of unsuccessful revivals? After reading this article, I have to wonder what its purpose is other than plugging Downer's friends.

B. Mr. Downer writes "Regrettably, the bulk of prose written expressly to accompany the release of mass market typeface revivals emanates from type hypesters, not type historians. Rarely have ad copywriters demonstrated the kind of convincing, insightful, authoritative knowledge of the subject that type scholars possess." Will Mr. Downer please lower himself from his pathetic throne of superiority and forgive the world for not achieving the high standards he requires? With the release of *Not Caslon*, Downer himself wrote "'Not Caslon'...It is surely one of the most comical and exuberant works of alphabet art..." If this isn't an example of hype, I don't know what is. Or, what about VanderLans's explanation of *Suburban*, "As it becomes increasingly difficult to create 'original' typeface designs, I am proud to report that *Suburban* can lay claim to being the only typeface in existence today that uses an upside down 'I' as a 'y'. Creativity knows no bounds." Would someone please give these two convincing, insightful and authoritative scholars a gold star?

I would like to end this letter by stressing that I'm not against criticism; rather, I am against the elitist and surface manner in which Mr. Downer and Mr. VanderLans have chosen to execute it. Criticism that is afraid to address all angles of an issue is worthless. Without mentioning the bad, how can we have a point of reference? How is this field supposed to progress if the level of dialog doesn't rise above this gutlessness? Are you really trying to further the field or simply trying to hold on to your piece of the pie? At this point I'm not sure if I want to support this misled, ego-centered self-righteousness.

Mike Kippenhan, el Rancho Starvo Design

Response

At the risk of furthering my reputation as a snot-nosed, self-righteous, elitist, ego-centered, misled, authoritative, yet gutless critic, I'd like to respond.

The idea for the Copping an Attitude article was to encourage a more considered attitude towards sampling, revivals, and experimentation in typeface design. It would have been quite easy to show examples of what I find problematic commercial typeface designs, but what good would that do? Why show the bad stuff, if you can make a more constructive argument by showing the exemplary?

In regards to my choice of words, I do need to point out that the word "upstart" means "one that has risen suddenly." By calling the foundries "upstart" I fail to see how you can interpret that as "an unfortunate attempt to dismiss their work." Contrary to what you believe, and the context in which I use the word upstart in the article will exemplify this, I generally admire the small foundries and the entrepreneurial spirit that propels them. I just happen to think there are certain aspects of the type design business they fail to address.

In regards to John Downer's article, some people are ambitious and set high standards for themselves and measure others by those very same standards. I don't see any

problem with that, particularly when they practice what they preach, as is the case with Downer.

I must also correct your observation that Part 2 included no "examples of unsuccessful revivals." John Downer was quite outspoken about what he felt were shortcomings of ITC Garamond. An entire sidebar was dedicated to this revival, including a visual example on page 19.

Lastly, I can't deny that certain aspects of what we do at *Emigre* are, in fact, motivated by what you refer to as "romantic illusions." And, just so you can rest assured, we've grown quite accustomed to the "disappointment" that often follows. Thanks for your letter, though.

Rudy VanderLans

Alien travels

By Putch Tu

Not too long ago, I was on the train to New York, talking to two of New York's more notable designers. Their discussion progressed from a curious litany of names and places and projects, a marking of territories common to primate groups, to the more discomforting discussion of technology, a territory seemingly outside of urinary trajectories. I'm often uncomfortable around designers, even though much of my training was in design. My beemer is an old, beat up BMW motorcycle, my glasses aren't expensive, my hair is unkempt, my design is solidly unsophisticated, and I read a lot of books with words – in short, I don't fit the profile. It's a love-hate relationship, really; I am obsessed with almost anthropological questions of how humans make marks and ascribe meaning to them in order to communicate, but the actual form the design practice takes seems vapid and dull. Sure, I'm interested in what stuff looks like, but I'm much more interested in what – and how – it comes to mean. So I look at expensive design picture-books in the bookstore but buy the cultural studies books that have very few images at all. Still, I am curious about designers despite myself, or to spite myself, so I sat across from these two guys on the train, read my book, and simultaneously played voyeur. One fellow was talking about his firm's move into the burgeoning field of multimedia. The other disdained technology altogether. They both agreed, at least implicitly, that the issue of technology was threatening to design.

It's a dreadfully unfortunate, if familiar theme, one to which I have been growing accustomed since 1979. As an undergraduate, my design professor assured me, with a rather disarming and cavalier sense of authority, that computers would never be sophisticated enough to be useful for designers. Years later, in the early to mid 80s, many designers in and around the Silicon Valley similarly seemed secure in their belief that hypermedia or nascent multimedia would never go anywhere, would never have relevance for graphic design.

So when these guys approached my favorite rants – that technology just isn't made easy enough for designers to use, that most design on the World Wide Web is trash – I just couldn't help myself and leapt into the conversation. I'd had enough.

It was less of a disaster than I expected. As patriarchal types are apt to do, they immediately questioned my credibility – a youngish, toothpick-chewing woman in leather whose name they did not drop, presuming to be knowledgeable about technology yet without the requisite arrogance. Still, to my surprise, they engaged in discussion, edged in keen, if not nervous suspicion. They agreed that if designers were more involved in technology at its developmental stage, the tools would be more effective and the design field richer in its expansion. Yet, in the same breath, they derided emerging fields of virtual reality, artificial intelligence, holography and ubiquitous computing as irrelevant to graphic design. And as always, they wanted me to pontificate about what the future will be like with testosterone-driven certainty. The last thing designers need, it seems to me, is another hero, another messiah who magically and breathlessly predicts the future. I refused.

I thought this was simply a matter of common sense. But something else was at play here. Both designers were feeling the unsettling anxiety about emergent technologies that many of us do, but beyond that, I clearly was annoying them with what they termed as my uncommitted attitude.

That comment was an indication that like much of the more popularized discourses surrounding technology, there is comfort in the polarized: technology is either demonized as a mill of satanic domination or depicted as the key for an utopian dream. They began to prod me, trying in one way or another to force me to commit to a stance. I really wanted to say, "I'm the first self-proclaimed non-messiah in cyberspace," but I didn't. I merely shrugged, watching the blur of lights smear over decrepit East Coast harbors. We were physically in the same time/space continuum, but otherwise, worlds apart.

My point isn't that they are wrong. While my former professor may have misjudged the speed of technological development, he taught me life skills and bad attitudes that were far more important. Indeed, those who invented computers themselves often made even more misguided predictions. One of the creators of the first computer, for example, claimed that five computers (at the time bearing less memory than the first Macintosh) would be all that America would ever need.¹ He designed that computer, of course, strictly for number-crunching, not seeing the wildly diverse uses to which this open-ended machine could be put. Nonetheless, their work was vastly important, and one need not throw out the precooked baby with the bathwater. What is wrong is that the guys on the train could only see in bipolar black and white. With the way technology is transforming many aspects of our culture, nearing the end of a millennium, it is little wonder that anxieties, enthusiasm, fear, adventure, and opportunity surface and predictions for the

1. Paul Ceruzzi describes Howard Aiken's skepticism of the need for more than four or five computers in the United States. Likewise, other pioneers of computers in Europe voiced similar sentiments. Paul Ceruzzi, An Unforeseen Revolution. Computers and Expectations, 1935-1985 in *Imagining Tomorrow: history, technology, and the American future*, Joseph J. Corn, ed. Cambridge: MITPress, 1984. pp 189-190, 201, (notes 1-3)

future are hotly contested. Like the curse in a fortune cookie warns, may we live in interesting times.

Cyberspace: yet another final frontier. I'm sick of both the bandwagon and the neo-Luddites. What I am interested in, rather, are the broad questions and implications of technology that emerge in multimedia and fringe areas of technology. Whether graphic designers eventually claim its relevance is an issue for others to make.

Haraway's cyborg in Plato's cave

Long ago, I was in a semi-contorted position, trying to watch the interior of my stomach lining, in real-time. As the physician went about his business with his serpentine microvideocamera traveling down my esophagus, I tried to motion that I wanted to see the image on the television. It was, as you can imagine, a bit more difficult than trying to speak through the fingers of a dentist. In this case, the doctor was clearly annoyed. "Look," I motioned rubbing my fingertips together and pointing to myself, "I'm paying for this." Reluctantly, he turned the television so both of us could watch.

A voyeur of the wonders of medical imaging, I collect all sorts of objective and scientific visualizations of my body. What fascinates me are the spectral and sensuous quality of these representations, images of bone and viscera, fluid and sound, movement and depth. That these machines can show us the universes of our inner bodies, microscopic elements and macroscopic outer space, is something they would have burned us at the stake for in another time. Now, we take it for granted. Here my body, through their tools, is enhanced as a site through which social, political, economic, and technological forces meet, often with very real and tangible effect. Here I become a cyborg in two ways. First, as the result of the way technology alters my material being. Second, conceptually, if you take *cyborg* to refer to the way technology alters our social, political, and economic terrain, from ATM machines to phones and the Internet. The idea of a cyborg tweaked my throbbing interest, not only in the liberatory possibilities outlined by Haraway,² but also because, quite literally, I have (shall we say) my own devices.

It comes as no surprise, then, that much of the electronic art I consume deals with bodies. Stelarc has a robotic third arm, attached to his body by electro-muscular sensors that are activated by strangers over the Internet. Gromala has users fly around in her virtual body-as-book, through typographic storms. Orlan undergoes plastic surgery, awake, answering questions from audience members while surgeons pull back her face. Sandy Stone talks about her transsexuality, phone sex, and how desire is constructed through technology. Notions of the body, especially the gendered body, are explored here. Notions of the body not only as a culturally

2. Donna Haraway, *A Cyborg Manifesto: Science, Technology and Socialist-Feminism in the 1980s* in *Simians, Cyborgs, and Women*. New York: Routledge, 1989. pp.149-181.

constructed notion and text to be read, but also as lived experience and material form. The aspect of materiality is especially important, since discussions of the experiences attendant to virtual environments, such as **disembodiment**, tend to underscore an underlying subscription to the well-worn Cartesian mind/body split. As Sandy Stone, Elaine Scarry and N. Katherine Hayles³ remind us, there is a real body attached to so-called experiences of disembodiment, that consciousness cannot be downloaded, that the body is more than disposable meat.

These examples may seem on the surface not to be related to graphic design, you say.

Yet I claim that they do relate, or at the very least, have implications for design in the electronic realm. When design begins to bear elements of electronic interactivity, design problems become more behavioral, as evinced by interaction design. The implication of the body in a user's experience of design is slightly more involved than seeing, reading, turning the page, walking through an exhibit, sitting in a chair, interpreting symbols, responding emotionally. Kinesthetic clicking-and pointing is involved, along with the cognitive rewiring necessary to read nonlinear forms. It is a very small step, granted. But what happens when a user can walk into a virtual book or virtual world, and be immersed in it?

In some circles, virtual environments can be considered to be multimedia taken to one extreme: the text, sound, video, animation, and other components become a three-dimensionally immersive experience, one that allows users to interact with the environment to an unprecedented degree. A nonlinear experience comprised of multiple media involves the body's senses: visual, auditory, cognitive, and, to a small degree, kinesthetic. An immersive environment, additionally, may engage other senses: larger kinesthetic movement, proprioception (the sense of being in one's body) and haptic (touch). Modest amounts of artificial intelligence are usually involved – the environment can respond to your particular actions and patterns of behavior. The larger design problems that emerge are behavioral: one designs worlds of possibilities, a constellation of if-then scenarios based on the user's potential actions and interactions with the simulation and its intelligent agents. Are designers, stereotypically relegated to styling someone else's content, up to the challenge of creating worlds, worlds that speak to the full bodily sensorium?

My question is always, "but what does it mean?" And what could it mean for designers? We can write ourselves out of the future, of course, but whether we term cultural workers **designers** or scribes, history tells us that these workers will persist in some form. Likewise, if we claim clay, papyrus, and the printing press as our historical legacy, it would seem foolish to reject electronic technologies. If one assumes that culture influences design and that design influences culture, then it

3. Allucquere Rosanne Stone, *The War of Desire and Technology at the Close of the Mechanical Age* Cambridge: MIT Press, 1995.

Elaine Scarry, *The Body in Pain: The Making and Unmaking of the World*, New York: Oxford University Press, 1985
N. Katherine Hayles, *The Seductions of Cyberspace* in *Rethinking Technologies*, Verena Andermatt Corley, ed. Minneapolis and London: University of Minnesota Press, 1993

is necessary to look at how technology influences both.

So, I feel compelled to ask, with a by now shredded toothpick, what does technology mean culturally? My questions may seem arcane to those not baptized into the cultural studies jargon: are these virtual environments, these simulations, to be understood in terms of the Platonic idea of mimesis, or a problematized instance of Baudrillard's simulacra, a place where Deleuzian fragmented and schizophrenic identities can further shatter themselves into ever smaller pieces? What role do designers play in Virilio's notion that our conception of time and space are radically altered by technology? That is, what are the effects of technology on our perception, on our notions and experience of reality, and what role does design play?

Blenders, power tools, remote controls, and other nervous machines

Some of my female friends are in their breeding years. A part of the traditional ritual these days is the obligatory sonogram, along with the obligatory Polaroid of the sonogram. This is apparently supplanting or at least preempting the more traditional quickening, the time when the woman first feels fetal movement, first **really feels pregnant**. What is important about this very real tale is that the woman's sense of her pregnancy, once realized by her own direct observation of her body, has shifted to an exteriorized faith in the authority of the scientific paradigm with its attendant technologies of representation.

What is it about technology that merits such faith? What is it about these machines that make us uncomfortable, that do not allow us to dismiss our relationship to them as simple anthropomorphizing, that inspire fear and dread, optimism and hope, a sort of Lacanian mirror that we force ourselves to look into? What would account for our eagerness to invest so much capital in a future that seems so well beyond our individual grasp?

Electronic technologies extend the reach of our perception (one can fly in VR, see another planet) as well as our ability to remotely act upon the world, (telepresent surgery, email to Kuala Lumpur). Of course, the same could be argued of Gutenberg's invention, for example, in its ability to extend our will and ability to act upon the world through textual means. What is different about the more recent technologies, however, is the reach and scope of these tools, their instrumentality – their ability to allow us to see both inward to our bodies and outward to the universe; to diffuse and consolidate power and distribute it globally, near the speed of light; their ability to construct a context that enables us to alter our relationship with ourselves and others to an unprecedented degree. Or is it?

Neo-messiahs and emerging cyberimperialists claim that the supposed new territory of cyberspace create media markets that offer us dreams of redemption, empowerment, utopia. Democratic features and new opportunities are often hailed in a sort of new American rhetoric: in cyberspace, for example, you can be whomever you desire, you can change your gender at will. Somehow, the positivistic hype tells

us, this technology is significantly different from its precedents. Gender and identity can be (re)constructed in cyberspace, and we can cast off the shackles of bothersome corporeal bodies, or *meat*. Cyberspace will allow us to reconceptualize notions of the public, private and professional spheres. But like virtual reality, the rhetoric of cyberspace does not approach the material realities of how this technology functions in the here and now. The *everybody*, millions of users distributed globally, in fact represent a sliver of humankind, and are overwhelmingly male. The decision makers and people who set agendas, the military still among them, more often than not have patriarchal goals and hierachal biases that structure the very way the technology itself is created to function. Finally, the democratizing aspects this technology offers, when actually implemented, more often than not creates a larger divide between the haves and the have nots. What seems important is to somehow forge a sober analysis of questioning this realm, rather than fall into the easy trap of polarized discussions. Haraway, Stone, and Hayles offer some methods of inquiry into the shifting boundaries between us and our machines, as others are emerging.⁴

Geeks and freaks

I travel among very strange worlds, from art and design to cultural studies and computer science, at home in none of them. My work in emerging technologies like virtual reality necessitate writing for grants from spook agencies like the NSA and the Department of Defense, among other military sources eager to reconfigure technology for consumer purposes. How do I consider this – am I merely a tool of post-industrial military complex? Better bombs through better design? Disarmament through virtual design?

A very short time ago, I was a lurker at the *Fifth Biennial Symposium on Art and Technology* with artists, musicians, dancers, computer scientists, engineers, and writers. They are the usual suspects who haunt diverse symposia, from art to computer science. An unlikely bunch, they endure exclusion in each of their respective fields. The problem of engaging in developing technology is not a problem unique to the design field. It speaks to the very heart of the issue, though: technology blurs, pokes at, reconfigures the boundaries of disciplines, and tends to provoke fear within disciplines in flux. Is it design? Art? Computer Science? The question seems much less important than: what was it telling us? Was it meaningful? The same was true of the marauding robot: was it sculpture, industrial design, embodied artificial intelligence, or a commodity fetish? That type of question is, in my opinion, of less importance than the one of what the robot can tell us about

4. This list, of course, is partial. Earlier theorists: Daniel Bell, Walter Benjamin, Guy Debord, and Marshall McLuhan. More recently: Jean Baudrillard, Scott Bukatman, Manuel de Landa, Gilles Deleuze and Felix Guattari, Fredric Jameson, Jean Francois Lyotard, Avital Ronell, Vivian Sobchack, Claudia Springer, and Paul Virilio

ourselves,
our relationship to our creations,
or our notions of nature,
life,
and machines.

Putch Tu works in virtual technologies and studies the subcultures that give rise to them. Despite an Ivy League education and deep implication in the Silicon Valley boom of the 1980s, Putch counts herself among the willing survivors. She is at home on the road on her 1938 BMW R12.

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Virtual grub street

Sorrows of a multimedia hack

By Paul Roberts

It's Wednesday, late afternoon, and I'm writing about classical composers – Bach, Beethoven, Mozart, and so on, thirty of them – for a multimedia product on European history. It's an odd assignment. I've never written about music or studied the people who make it. My specialty, before I started writing for CD-Rom companies, was environmental journalism, and what I know about classical composers is, basically, *Amadeus*. But ignorance, in the new electronic literature, isn't always an obstacle. The irony of the information revolution is that consumers neither like nor expect long, densely written texts on their computer screens. Long texts addle the eyes; they slow the rapid-fire interactive process, steal precious screen space from the animation, video, and multimedia's other, more marketable gewgaws. So we writers needn't be experts so much as filters whose task is to absorb and compress great gobs of information into small, easily digestible, on-screen chunks. Brevity and blandness: these are the elements of the next literary style.

Of roughly one thousand essays I've written for CD-ROM companies here in Seattle over the last year and a half, fewer than forty ran longer than two hundred words – about the length of the paragraph you're reading now – and most were much, much shorter.

I never expected to be working like this. I once earned a respectable living writing long, earnest articles about spotted owls, riparian buffer zones, even, on one occasion, a 10,000-word treatise on the Douglas fir, hero tree of the Pacific Northwest. Nowadays, whole months go by when I do nothing but crank out info-nuggets on whatever topics the multimedia companies believe will sell: dead composers, large African mammals, sports stars of yore. It is, without question, hack writing, the kind of pap (I used to think) only the feckless and unprincipled had the nerve or need to take. But if the emergence of the so-called new media has clarified anything, it's just how malleable literary standards and professional expectations are, how quickly they can wither or mutate or be ignored altogether in the presence of powerful novelty and cold cash. In early 1994, just before I joined the digital revolution, few of my writer friends had any understanding of what

CD-ROM was, much less any desire to write for it. Today, half of the writers I know in this town are either working in electronic publishing or trying to.

A brilliant performer from a young age, Austria's Wolfgang Amadeus Mozart (1756-1791) was perhaps the most influential composer of the eighteenth century. He wrote more than 130 works, including the operas *Don Giovanni* and *The Marriage of Figaro*, and is noted for his purity of form and melody. Despite such talents, Mozart struggled financially, earning a meager living as a pianist and tutor. He died a pauper at age thirty-five.

An economist might explain the current literary redeployment as a simple shift in supply and demand. Between Christmas 1993 and Christmas 1995, consumer ownership of CD-ROM drives jumped from fewer than 9 million to an estimated 40 million, with another 17 million purchases projected by the end of 1996. What was accurately described a few years ago as a garage industry is now very much a mass market, and to keep it that way multimedia companies like Microsoft and Voyager and Broderbund are spending billions of dollars developing thousands of new CD-ROM titles in virtually every category one can imagine: games, naturally, but also encyclopedias, interactive magazines, children's products, how-tos, history, science, wildlife, even pornography. This title wave has generated a massive demand for what multimedia executives glibly call content, launching the industry on an enormous hiring binge: software engineers and digital artists, of course, but also legions of writers and editors, lured away from newspapers, film companies, magazines, and publishing houses, plucked from the ranks of the un- and underemployed (or freelance, to use the more generous term) and offered more money a week than many previously had made in a month. For those of us raised to believe that a career in writing meant a life at or near the poverty line, multimedia feels like a gold rush, a wartime buildup, a massive new government program. But the new media's appeal to writers goes beyond dollars. There's the allure of a sexy new technology, sharpened by a fear of professional obsolescence. The fact is, multimedia can do things the printed page never even dreamed about. It's digital, which means that obscene amounts of data can be encoded and stored on a four-inch, wafer-thin laser disc. It's also interactive, which means that all those digitized artifacts — hundreds of photos and graphics, video clips, my own wee texts — can be linked together in a kind of electronic-semantic web. You can access my essay on Mozart, for example, from any number of other texts on the disc, simply by finding the word *Mozart* in highlighted, or hot, text and clicking on it with your mouse. You could be reading something on eighteenth-century music, say, or Viennese opera, and — click — up pops my terse little bio. But there's more. Once inside my text, you might click on the words *Don Giovanni*, and get yet another text, or perhaps a few seconds of music from the opera, or a video clip from *Amadeus*. And once in *Don Giovanni*, you might encounter the word *Italy* and click up a nice

little geopolitical summary. And so on. Each multimedia text – and, theoretically, each word in each text – can serve as an electronic portal to an infinite number of other digital locations. With a series of clicks, you can hop from one object of fascination to any number of others, branching this way and that along various semantic trails, creating your very own, custom-built, nonlinear narrative from a vast reservoir of recombinant texts.

Clear waters and abundant marine life make Mafia, an island off the coast of Tanzania, one of the best diving spots in the world. Tropical temperatures are ideal for many varieties of crustaceans, including lobsters. Divers also encounter huge schools of fantastically colored fish and can swim with sea turtles, octopuses, large but docile whale sharks, and, occasionally, the manatee-like dugong.

Nonlinearity might seem like little more than channel surfing, but its proponents – ranging from wealthy software gurus to tenured English professors – champion it as an authentic yet functional postmodern form, a critical break from the ageold, rigidly linear format of the printed page. Nonlinearity, we're told, redistributes narrative power to readers. It undermines the tyranny of the Author. Its branching intertextuality is a much closer match to the brain's own networks. Indeed, advocates believe that with nonlinear text, or *hypertext*, literature can at last give full expression to the kinds of unconventional discursive impulses that folks like Joyce and Barthes were forced to convey via the grotesquely obsolete linear format. For that matter, nonlinearity provides a kind of running critique of the linear format, laying open the myth that stories can be told only one way, in only one direction, and toward only one conclusion: toward closure. With nonlinearity, as with thought itself, there is no closure, only additional links. Thus nonlinearity, to its proponents, is the beginning of a new, more honest and complex literature – and, perhaps, the beginning of the end of an old one. "The printed book... seems destined to move to the margin of our literate culture," writes Jay David Bolter, a Georgia Tech professor of communications and one of the more articulate exponents of electronic texts. "Print will no longer define the organization and presentation of knowledge, as it has for the past five centuries."

Personally, I've never achieved the degree of literary transcendence that these advocates describe. Down at the level where I operate, the digital revolution is actually something of a bust, a high-tech revival of the piecemeal sensibility that animated the pulp magazines and the early broadsheets. But mine, it seems, is a minority view. Even as you read this, editors and publishers the world over are practically wetting themselves in the rush to get their content *on disc or online*. Meanwhile, my brethren are flocking in ever greater numbers to digital-writing conferences with an enthusiasm more typically encountered at Tony Robbins seminars. Last year, to offer just one example, a Seattle arts organization sponsored a

workshop for writers hoping to break into multimedia – nothing special, just a local CD-ROM producer sharing insights and showing demos. It sold out. Tickets, at \$40 each, were snapped up weeks in advance. The night of the event, organizers ran out of chairs, and folks who hadn't bothered to preregister actually had to wait on standby, like fans at a rock concert, praying for no-shows. What a poignant comment on the digital revolution: an overflow crowd of writers – sensitive, struggling artistic types, by and large – forking over a week's grocery money to hear not some world-famous poet or author but a mid-level exec in an industry whose greatest hit is an interactive game called *Myst* and whose primary unit of literary meaning is a toneless, unsigned blurb that, for all the cleverness of its high-tech format, could have been written anytime during the previous five hundred years.

Tormons Tablets cure all disorders of the Liver, Stomach, and Bowels, Head-ache, Dyspepsia, Constipation, Biliousness, Dizziness; Clear the Complexion, Increase the Appetite, Tone the System, and are a sure Remedy for Depression of Spirits, General Debility, Kidney complaints, Nervousness, Sour Stomach, Disturbed Sleep, etc.

I'm making most of these examples up, by necessity. The multimedia industry is hugely paranoid about leaks and we're all required to sign fiercely worded nondisclosure agreements, or NDAs, before we're even told the topic of our next assignment. Such secrecy usually baffles the newly initiated, particularly after they see what they'll be writing and how unlikely a target of industrial espionage it is. Still, I can't reveal the names of my client companies and bosses, or the CD-ROM titles I've worked on. Technically, I'm not even supposed to disclose the existence of the nondisclosure agreements. It's as if multimedia companies want deniability, as if the transaction between writer and publisher never occurred. In multimedia, as in other instances of corporate creativity, text simply happens. It appears on-screen without any evidence of being authored by a single, living individual.

NDAs notwithstanding, it's probably safe to reveal that I am, in fact, a real person, thirty-four, married, with a two-year-old daughter and four-year communications degree. Like many multimedia writers, I got my literary start in newspapers and magazines, settling finally at an alternative newsmagazine in Seattle. Also like many multimedia writers, I work mostly at home. My text-production facility is a small second-floor study in my eighty-year-old house, in a wooded, hillside neighborhood seven miles from downtown Seattle. My workspace resembles that of any busy writer: computer, reference books, coffee cups. The giveaway is the floor. It's almost always buried beneath thick strata of mimeographed articles on a range of topics too diverse for a normal journalist: Roman history, Greek philosophy, rain forest ecology, medieval battle tactics, Mayan archaeology, Romantic poets, mountain climbing.

Sadly, multimedia writers are too harried to savor the variety of subject matter.

Although a single CD-ROM title might contain several thousand separate text

blocks, text budgets are typically small in comparison with budgets for the more time- and memory-consuming video or audio components. Thus, the famously high wages for writers – anywhere from \$18 to \$30 an hour – are based on the expectation that we will extrude texts with machine-like efficiency. Producers are always encouraging us, dropping such helpful comments as “These really shouldn’t take more than thirty minutes apiece” and “I was getting about three of these done an hour.” I’ve no idea where they get these estimates, but the tactic is effective. Before I developed the rhythms and strategies of the seasoned multi-media writer, I kept a stopwatch by my computer, struggling to crank out each blurb in under fifteen minutes. This follows another irony of the information revolution: the texts of the next century are being manufactured much like the products of the last one – on an hourly basis in a vast, decentralized electronic sweatshop.

For a time I was able to take a romantic pleasure in the frenzied pace of the work. It seemed so classic, so nineteenth-century. Dostoevsky and Dickens both poured forth prodigious streams of words every week. George Gissing hammered out the 220,000-word novel *New Grub Street*, the portrait of a hack writer, at the rate of about 3,500 words a day – half again as much as my best performance. But my fantasies soon buckled under the load. Those walking word machines wound up with true works of art. All I have at the end of the day is screen after screen of blurbs.

Invented by Christopher Sholes in 1867, the typewriter transformed both the process and content of written communication. Typewritten letters were initially dismissed as cold and impersonal but quickly came to dominate business writing, while the typewriters themselves helped open office work to women. Mechanical typewriters were eventually replaced by electronic models, which in turn have been rendered all but obsolete by computer word processors.

Most multimedia writers I know didn’t plan their move into electronic publishing. I, for example, was never a computer enthusiast. To the degree that I considered it at all, the entire phenomenon of interactive CD-ROM – which even then was being invented in suburban office parks just a few miles east of my house – seemed like a brush war in another hemisphere: vaguely interesting, mostly irrelevant. But things change. My newspaper’s rumor mill warned of impending layoffs, my daughter arrived, and I began to notice that many of my writer-acquaintances were disappearing, one by one, from the freelance ranks. I’d meet them at parties and no sooner had talk turned to jobs than they’d launch into breathless depictions of the work they were doing, and the technology they were using, and, more to the point, the buckets of money they were earning. No one had ever talked this way about writing. It was like hearing some just-returned settler describing the frontier: wide-open and mine for the taking.

My first multimedia assignment, finagled through a friend of a friend, came in the spring of 1994. A man called me at home and asked whether I knew what CD-ROM

was and if I had ever written for digital publications. I mumbled an ambiguous reply and found myself the following afternoon in a small beige office in the suburban megalopolis known hereabouts as the Eastside. The voice on the phone turned out to belong to the project producer, a gaunt fellow in his thirties whom I'll call Bob. Bob shook hands hastily. He wore faded blue jeans and an untucked polo shirt. A year before, he'd been editing a magazine somewhere east of the Rockies. Today, he seemed harassed and tired and in serious need of cigarettes. Bob asked a few perfunctory questions about my writing, interrupting my answers with a staccato "uh-huh, uh-huh," then, apparently satisfied, hauled out a nondisclosure agreement. I signed it. Bob explained that I was now legally barred from telling anyone, including family and friends, anything about the Project. I laughed. Bob looked cross. He related a story of several loose-lipped former employees who had been tracked down and prosecuted. "They're serious about this," said Bob, catching and holding my gaze.

Later, as I learned more about the industry, the NDAs became more understandable. Title budgets can top \$1 million, with no profits expected for three years. The more excited a company is about a project under development, the more paranoid its staff becomes that a single leak might let a rival get to market first with a similar product. I'm still not sure if these fears are valid or simply an extension of the militaristic paranoia and manic team-spiritedness that have long energized the software industry. In any case, secrecy remains a central component of multimedia's corporate character, infusing what is essentially an entertainment business with a gravity both absurd and titillating.

At least, I found it so. Bob, apparently, was well past the philosophizing stage and was also in a hurry. He moved deftly from the NDA to a terse discussion of production schedules, software requirements, and, finally, the Assignment, handing me a list of fifty subjects, somewhat historical in nature, and a thick stack of reference materials. He wanted seventy-five words on each by the start of the following week. Nothing fancy. Simple declarative sentences. High school reading level. Tight. No one had ever talked to me about writing like this before, either. I felt disoriented, like Barton Fink after he receives his first assignment for a "wrestling movie." I scanned Bob's office, looking for clues as to what I'd gotten myself into. On the wall, I spied a chalkboard sketch, a series of small circles, each labeled with an abbreviation (Intro., Vid., Aud.) and all interconnected by spokes. A nonlinear conceptual blue-print, Bob explained vaguely, waving at it. For the project. For the first time, he smiled. "But you guys don't need to worry about that."

The truth is that multimedia writers needn't worry about a great many things. We get our assignments, write our texts, and some months later, a shiny disc wrapped in an inordinate amount of packaging hits the shelves at Egghead or Waldenbooks. No one expects us to understand or care what happens to our texts in the interim, because writers are mere cogs in the multimedia machine. We're never asked to generate story ideas and pitch them to editors. We needn't concern ourselves with

story structure, or themes, or any of the other, more celebrated elements of traditional writing. All that is handled by the engineers and designers and script-writers who lay out the disc's schematic, who decide where and when the digital objects will appear, which object will be linked to which, and why. Questions traditional writers might agonize over for hours or days – lead paragraphs, say, or transitions – have been rendered moot by the peculiarities of the nonlinear narrative.

What remains for CD-ROM writers isn't so much writing as tailoring; tucking specified content into a specified space. Producers send us off with sage, neo-Strunkish advice: avoid complex syntax and vocabulary; suppress voice or attitude; do not, under any circumstances, exceed the specific word count. It's a strange way to write. Strange, too, to see how easily the brain shifts from the extended symphonic rhythms of a longer article to the staccato jingle of the 100-word blurb. Dismaying, actually. Yet the self-disgust pales, at least initially, against the sensation of relief. Conventional, linear writing can be a gruesome task. Beyond the lame pay and the feast-or-famine job cycle, the pounding of disparate facts and feelings into a tightly structured narrative is like digging a ditch across a concrete parking lot. By contrast, squirting out blurbs is a cakewalk, a lower-order process managed, I'm sure, by the same lobe that handles heart rate and knitting. For the first few months, I felt as if I'd entered a writers' fairy land, where one could earn a good living without anxieties or writer's block, without the corrosive oscillations between depression and ecstasy – just a steady putt-putt-putt of words. I'd fire up the computer at 8:00 A.M., shut it down at supper, and by the time I'd raised the fork to my lips, whatever I had been working on six minutes earlier had evaporated from my head.

The fifty-word caption typically begins with a declarative sentence summarizing the photographed subject. The second sentence puts the first in context with a general topic statement. The third adds interesting, even humorous detail. Beginning multimedia writers are often advised to study magazines famous for their captions, including *National Geographic* and *Life*.

My disillusionment with multimedia grew less out of any principled objection than from a slow accretion of insults and revelations. There was the sheer tedium of blurb writing. There were also the routine demonstrations of text's low rank on the CD-ROM totem pole: whenever software engineers had trouble cramming all the visual components onto a disk, we writers would simply be told to chop our texts in half. As my meager status sunk in, I found it ever harder at parties to wax enthusiastic about my job. My humor darkened. I took to introducing myself as a hack, a blurbmeister, affecting a cynicism that I didn't quite feel but I knew was coming. From a distance, a multimedia text looks exactly like a paragraph plucked from a

standard linear narrative. But closer inspection reveals important differences. In normal writing, the writer uses the paragraph as a bridge between specific points. Not so with the multimedia text block. Each blurb must, almost by definition, carry out its minimal literary function in virtual independence from the rest of the story. If I'm writing multimedia Text A, for example, I can assume no specific prior knowledge on the part of the reader, because he or she may be arriving at Text A from any of a number of previous texts. Similarly, I can't use Text A to set up Text B, because the reader may be bouncing to any number of Text Bs. For that matter, I can't even infuse Text A with a meaning or sentiment that is essential to the reader's understanding of, or pleasure in, the larger narrative, because the reader, as narrative boss, may skip Text A entirely. The style of the multimedia text, if you want to call it a style, is one of expendability.

I realize that even in a conventional article, I can't make my linear readers read what I write in the order that I write it. Linear readers skim. They jump ahead, looking for interesting parts, then refer back for context – behaving, in some respects, like the multimedia user. But the nonlinear interactive process undeniably accelerates this haphazardness. The nexus of creativity is shifted from the writer to either the producers, who lay out the text links, or the readers, who make use of those links. To be fair, if a multimedia writer has the technical expertise and the financial resources to control the entire story-line process, some interesting literary and journalistic forms are possible. Allowing readers to choose their own research paths, or, in the case of nonlinear fiction, to choose among multiple outcomes, probably qualifies as a genuine step forward in literary evolution. The reality, however, is that most multimedia writers are not (and, given the complexity and expense of production, aren't likely to be) in control of the entire process or even a large chunk thereof. Multimedia is the epitome of corporate production, of breaking projects into elements and doling them out. As such, the average writer is effectively, if not intentionally, sealed off from the larger narrative, and quickly learns not even to think about how the texts will be used or where the writing is going, because it doesn't matter. One text is pretty much like another, a self-contained literary unit: modular, disposable, accessible from any angle, leading both everywhere and nowhere.

Larger text blocks, though providing more freedom than captions, often prove harder to write. Readers anticipate more information, so more hard data – distances, ages, sizes, dates, etc. – are critical. Larger texts also require some adherence to standard writing rules, such as varying sentence length, as well as some degree of structural innovation. Themes raised in an opening sentence, for example, may require mention or resolution in the conclusion. Ultimately, however, larger texts can grant only the temporary illusion of conventional writing, such that writers embark in directions that, while interesting, simply cannot be explored within the allotted space.

Nonlinearity advocates often claim that a conventional writer's frustration with this new form stems from the loss of authorial control. We are angry that readers can pick and choose among our ideas or can mix our texts with information from entirely separate sources. Mostly, though, we are threatened by the new kind of mind that such writing requires. "A philosophy of mind for the coming age of writing," Bolter writes, "will have to recognize the mind as a network... spreading out beyond the individual mind to embrace other texts, written in other minds.... The most radical solution would dispense altogether with the notion of intentionality: there is no privileged author but simply textual networks that are always open to interpretation. Such a philosophy may be nothing less than the end of the ego, the end of the Cartesian self as the defining quality of humanity."

I admit that the thought of losing narrative control is excruciating. But is my frustration so selfish or authoritarian? We hardly expect musicians or sculptors to allow their work to be pulled apart and reassembled with bits and pieces from other artists. We writers are no less invested in our work and cannot be expected to delight in the prospect of merely contributing to a collective, egoless supertext. Nor are we likely to be persuaded that the journalistic imperative – to educate and inform a readership – can come about via a format that is so antithetical to persuasion or extended analysis.

Ultimately, what depresses me most about multimedia writing is its sheer pleasurelessness. Conventional writing, even at its low-paying, psychotic worst, provides me with an intellectual challenge, and lets me attempt a mastery of language and form. Writing allows me to tell stories. Multimedia writing is not about telling a story. It's about telling fragments of stories, fragments that may or may not add up to anything. It's about preparation and research – everything but the actual narrative release. At the end of the project, you're left saturated and unfulfilled, ready to burst. One Saturday night, at a friend's house for dinner, having spent the previous four weeks writing tidbits for a science title, I found myself rambling almost uncontrollably about the project. For a full forty-five minutes, I flouted the nondisclosure agreement, marshaling facts and figures, prying open 100-word capsules and spreading their contents into a tale I'd been unable to tell for nearly a month.

The universe is believed to be between 10 billion and 20 billion years old.

Composed mainly of empty space, the universe is dotted with countless stars, galaxies, and planets. Some scientists theorize the universe began as a single, ultradense ball of matter, which exploded. This so-called Big Bang Theory may explain why all known objects, including those in our galaxy, are moving away from one another at high speeds.

We are living, according to some high-tech advocates, in the "late age of print," and I have to say that the business of writing is being transformed with amazing

speed. Publishers continue to pour out new discs by the cargo-container load. Conferences go on inviting neo-luminati to discuss the shape and substance of the New Literature. Phone and cable and computer companies, meanwhile, are developing fantastic new technologies to bring interactive everything to consumers' fingertips. So while the explosive growth of the CD-ROM industry is waning somewhat, the creative slack is being vacuumed up by online services, whose technical criteria place similar requirements on writing and whose managers seem to be hiring writers with almost as much vigor.

Indeed, I can imagine a not-so-distant future when a sizable fraction of professional writers won't ever enter the world of print but will go directly from school to digital publishing. Maybe they'll be constrained at first by the needs of older readers who were raised on print and who have only recently and partially and timidly converted to the nonlinear faith. But in time, this will change, as printing comes to be seen as too expensive and cumbersome, as computers become more powerful and more interlinked, and as they show up in every classroom and office, in every living room and den. My twelve-year-old nephew lives in a small rural eastern Washington town, yet he is as comfortable with on-screen multimedia presentations as with comic books. He represents the mind that writers will write for. Perhaps his generation will perceive language in a different way. Perhaps the understanding and meaning and pleasure they will derive from creating and consuming nonlinear text will be as significant and as beautiful as anything that has come during print's 3,500-year reign. Yet I can't help viewing this future with alarm and sadness, not simply because I question the quality of the literature these people will have but because I can already see that I won't be capable of comprehending it. I have participated in, and in some small way precipitated, my own obsolescence. For those raised in the tradition of linear print, this may represent the bleakest irony of the digital revolution — that we so willingly took part in our own extinction.

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Towards an aesthetics of intellectual discourse

The Telephone Book: Technology, Schizophrenia, Electric Speech

By Avital Ronell

University of Nebraska Press

Reviewed by Carl Francis DiSalvo

Avital Ronell's style has never been confined to presenting a theoretical premise and then expounding upon it. Instead she has consistently dared to infuse her work with a dose of literary schizophrenia resulting from an abundance of information and a meticulous examination of details. Her writing results in dense psychoanalytic deconstructions inextricably tied to the history of her subject.

To date Dr. Ronell has written four books. Her first book, *Dictations: On Haunted Writing* (1986), studied the issue of authorship as it related to Goethe and his *de facto* biographer Eckermann. In her second book, *Crack Wars: Literature, Addiction, Mania* (1992), she examines the phenomenon of the War on Drugs as it relates to Madame Bovary, Flaubert, and the idea of literature as a narcotic. Her most recent book, *Finitude's Song* (1994), is a thorough investigation of popular culture at the end of the millennium. But it is her third book, *The Telephone Book: Technology, Schizophrenia, Electronic Speech* (1989), that is the focus of this essay. With *The Telephone Book*, Ronell created an unprecedented piece of scholarly work. *The Telephone Book* is a hyperdesigned discourse on the psychological history and use of the telephone. She investigates the authors of the technology (Bell and Watson) and their personal histories and psychologies, as well as Heidegger's relation to National Socialism via the telephone, and situates these studies within an analysis of the schizophrenic nature of electronic speech as it is represented by the telephone. But what is of paramount importance is that the linguistic content of the text does not sit alone in its discourse. Rather, through the use of novel text formatting integrated into the book as innate structure, Ronell created (in collaboration with designer Richard Eckersley and composer Michael Jensen) an object of discourse that had not been seen before. The discourse of *The Telephone Book* is created through presentation of formatted text as a visual narrative in conjunction with linguistically based narrative. By creating a scholarly work of this nature, Ronell and Eckersley reached what McLuhan (1964) called a *break boundary*; a point where one medium crosses its own paradigms and becomes something else. Through the orchestrated use of design, *The Telephone Book*

transforms the nature of reading text by the infusion of visual elements that transcend the acts of reading and writing from the recording of information to the dynamic creation of knowledge.

In order to examine the structure and relevance of *The Telephone Book*, it is necessary to first place it in its own socio-historical setting. In the 1990s a new style of design began to appear that was a direct fallout of the digitalization of that field made possible by powerful software devoted to type and layout. This new style experiments with visually deconstructing design and transforming design towards a mode where type and layout are used not only to convey a message but also to enhance and examine the message. Design critic Steven Heller (1993) caustically labeled this style *The Cult of The Ugly*. He described this style as "The layering of unharmonious graphic elements in a way that results in confusing messages." Whatever the fallout of this style and its heated debate in the design world may be, *The Telephone Book* is a product of this experimentation within the design field and belongs to a tangent of its history.

Other phenomena that had their origin in the late 1980s included hypertext, hypermedia, and multimedia. These forms of digital communication combine text, sound, video, and animation. Much research and writing has gone into theories of cognition behind such methods and their effects facilitating learning (Barrett, et al, 1992). By the integration of visual and textual media in communication "knowledge ceases to be an artifact (or to be embodied in artifacts) and becomes instead a process; it is dynamic rather than static, not to be confused with mere information." (Slatin, 1992). This theory of the creation of a dynamic discourse through the integration of visual and textual media is at the root of appreciating the importance of *The Telephone Book*.

To completely relay the intricacies of visual formatting in *The Telephone Book* without reprinting the book in its entirety is impossible. However, some explanation can be put forth as to the unique narrative that *The Telephone Book* creates within its structural form. The formal qualities of the text serve as a structure for the relation of ideas within the text. Upon first sight of *The Telephone Book*, it is obvious this is not like any other book. Its physical format itself is unusual (10"x 5.5"). The pagination is accomplished by black rectangles along the far right edge of the page, such as would be in a telephone book referencing letters. Even at this basic level the book identifies itself as something other; a place of information/ideas brought together to find answers, or at least defining the route to those answers. The notes section of the book is distinctively yellow, differing in appearance from an actual Yellow Pages only by the page content and the paper type. Leafing through the book one finds an imaginative variety of fonts, type styles, and sizes. The layout ranges from standard to skewed columns, to pages covered in dashes, to virtually illegible passages.

The object *The Telephone Book*, while resembling a scholarly text as we have known it in the past, cannot be identified exactly as such. It is a book. It is a text. Yet its

structure and function are unlike any we have read before. Thus the primary function of the textual formatting is to convey a larger sense of the very nature of electronic speech that Ronell defines as being essentially schizophrenic. On a more acute scale, this particular formatting of the text serves to situate different aspects of the linguistic narrative in relationship to one another and their convergent history, psychology, and implications. The structure thus references both electronic speech and schizophrenia, visually citing their interconnectedness and their relations to the specifics of the theory Ronell sets forth. As an analogy for both electronic speech and schizophrenia, the text mutates from clear legibility to bursts of static (represented by pages filled with alternating em and en dashes), creating a visual experience of thwarted communication as often occurs in poor phone connections or in the schizophrenic being/moment. Between legibility and noise there is a wide range of formatting, from skewed text to text kerned and leaded so tight it overprints itself. Through this novel boldness, the act of reading text becomes an experiential moment that involves the schizophrenic nature of electronic speech, its history and its psychology, and all of its hazards and confrontations.

On the primary level of analysis, *The Telephone Book* is a reification of the theory Ronell has developed and is proposing therein. Patricia Ann Carlson (1992), in her chapter in *Sociomedia: Multimedia, Hypermedia, and the Social Construction of Knowledge*, eloquently states that "to reify a concept is to transform the unobservable into objects that can be examined and inspected." That is precisely what *The Telephone Book* is: an object of theory to be examined and inspected, to be read in a new way. The unobservable would be in this case Ronell's theory; a dense and thorough examination of the psycho-historical aspects of the telephone, ultimately concluding that the history of a technology is an intrinsic part of its identity. The method of the construction into an object would be the formatting of the text; a formatting as previously described with its own schizo agenda. Standard convention in scholarly works presents the text in a linear structure. The text is read from left to right, top to bottom, at a right angle. Here is where *The Telephone Book* makes a radical departure from convention. The text must be read, but the method of reading is of a new kind. The text must also be viewed, it must be watched, as its formatting creates differentiations within itself. The necessity of having to watch a linguistic text introduces a new concept and function into the act of reading. One watches something assuming that it will do something; that it will act, that it will perform, at the most basic level that it will change. In *The Telephone Book*, the text does something through its formatting; it creates a unique structure, a descriptive architecture of ideas. The complex treatment of the text as object produces a visual analogy, a visual narrative, inextricable and yet distinct from *The Telephone Book's* linguistic content. In that process, a discourse is created and expanded beyond what would be singularly possible with text alone. But what exactly does this action of the text represent, what are we watching? We

are watching the action of the text as it performs the theory. The complex formatting of the text functions as an exposition of the theory interpretively performing the linguistic content of the theory. It accomplishes this by changing type and layout in direct relation to the content of the text. By these radical changes of visual form, the act of reading is put into an altered state. This altered state of reading, being of a unique nature, becomes an experiential moment that in turn affects the epistemological foundation of the reader's relation to the text. The blocks of formatted text act as a language unto itself relying upon visual aesthetics in conjunction with linguistic content for the presentation of an idea. In this way the text very much does perform; it becomes an actor for the linguistic content of the theory with the formal structure of the book being a stage. If what we are watching is a performance, then what is the plot? The plot is the construction of knowledge. "If information is the news of difference (Bateson, 1980), then knowledge has to do with recognizing the implications of the news, with creating patterns that connect the differences but do not resolve or dissolve them" (Slatin, 1992). These differences in *The Telephone Book* come from the diverse sources cited within: excerpts from interviews, journals, historical documents, philosophical texts and bits of fiction. Without the patterns Ronell visually creates, these differences might remain obtuse. The use of novel and relevant formatting of text in relation to the theory visually creates these patterns that connect the differences, and in doing so relay an interconnectedness between diverse aspects of the theory.

In *The Telephone Book*, Ronell is not only presenting information and augmenting it with graphic illustrations. She is systematically codifying the information visually and through this codification representing a connectedness that would otherwise go unnoticed. But it is not a literal diagrammatic representation. It is a representation that places the text in the realm of what McCluhan (1964) termed a cool medium: one requiring a high level of participation by the reader. Thus Ronell begins the book with a section entitled A User's Manual which begins "Warning: *The Telephone Book* is going to resist you. Dealing with a logic and *topos* of the switchboard, it engages the destabilization of the addressee." There is no avoidance of the fact that to read this text is to participate in an experience. This participation demands that the reader use both the linguistic and the visual elements of the text as a guide for the construction of the text as a whole. It is in this process of construction by the reader from the patterns in *The Telephone Book* that the leap from static to dynamic is made, resulting in an experiential of knowledge rather than mere information. As such, *The Telephone Book* is truly revolutionary in a pedagogical sense.

Where does *The Telephone Book* leave us? Perhaps more appropriately, where does it take us? As for the reader, it journeys to a point of interaction in process of the creation and transfer of knowledge. This places the responsibility of being an active reader on the reader and also involves learning to read in an additional

sense; that is, learning to read by viewing in conjunction with a textual analysis. In doing this, *The Telephone Book* creates a new paradigm for scholarly publication. This new paradigm provides the use of text formatted in a visual manner to serve as an integrated referential within a written treatise. Additionally, it positions the task of knowledge at the forefront of intellectual discourse, rather than simply the relay of information. Piaget (1964) stated "...knowledge is not a copy of reality... To know an object is to act on it. To know an object is to modify, to transform the object, and to understand the process of transformation, and as a consequence understand the way the object is constructed."

The Telephone Book has done this. It has constructed a new paradigm for an aesthetics of intellectual discourse, an aesthetics that will revolutionize the text-based creation of knowledge.

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